

LARNACA: The raid that went wrong

'A complete collapse of understanding'

BY ROGER MATTHEWS

ANGER, indignation and astonishment at the action of the Cypriot authorities were expressed by Egyptian officials and newspapers to-day following the tragic shoot-out at Larnaca airport last night. The Cypriots turned what had been a humanitarian rescue operation into a violent tragedy, said one senior Foreign Ministry official to-day. The Egyptian commando group had gone to Cyprus with the full knowledge of the President of Cyprus, Mr. Spyros Kyprianou, it was claimed and "we took it for granted that the Cypriots would co-operate fully given that we did inform them, added the official. The main points to have emerged so far in the Egyptian version of events are:

■ The C-130 transport aircraft landed at Larnaca airport at approximately 6 p.m. carrying 60 or more adequately but not heavily armed commandos who had been specially trained for carrying out such operations.

■ The President of Cyprus had personally been informed that the plane was on its way to Larnaca, no objections had been raised and the C-130 was duly given permission to land. Precise details however about the number of men on board and their exact intentions do not appear to have been fully spelled out.

■ For the next two hours the commandos remained in the aircraft on the ground at Larnaca while a detailed study and assessment was carried out of the Cyprus Airways plane in which the two gunmen were holding the 11 hostages and the three-man crew.



Two Palestinians, believed to be the killers of Mr. El Sebat, the Egyptian newspaper editor, are led away. The gunmen are first and third from left.

■ The Egyptians then launched their attack on the aircraft at about 8 p.m. As they opened fire they were "astonished" to come under return fire from Cypriot national guardsmen. Officials here emphasised that it would have been "total outside" for which the plane if it had been known that the more heavily armed Cypriots would resist.

Clearly there was a complete collapse of understanding between the Egyptian and Cypriot authorities, the reasons for which are now slowly becoming clear. After the initial anger and dismay at the murder of Mr. Youssef Sibat, the editor-in-chief

of Cairo's Al Ahran newspaper, at the Hilton Hotel in Nicosia on Saturday morning, suspicions began to grow that the Cyprus government was not doing all that it might to capture the two killers. This impression was fuelled by television coverage of the events in Nicosia with police apparently standing by unconcerned as the two gunmen were allowed to remove their hostages from the hotel and take them by bus to the airport. These pictures caused a deep impression in Cairo as did the subsequent decision to provide an aircraft for the men to leave the island.

It was then recalled that the security at the Hilton hotel had been rather less than adequate given the potentially vulnerable position of prominent Egyptians who had accompanied President Anwar Sadat to Jerusalem and were generally associated with his peace initiative. After the murder of Mr. Sibat, who was clearly singled out as the only victim of the attack, some of the hostages appear "rather relaxed" to television viewers here.

Given this background, the Egyptian authorities became even more anxious when the aircraft arrived back in Cyprus late on Sunday afternoon to accompanying reports that the Syrian regime had given permission for it to land at Damascus because of "humanitarian considerations." Since Egypt has broken off diplomatic relations with Syria there was a fear that President Hafez al-Assad might state that the two killers were being handed to the Palestinian Liberation Organisation for punishment and then nothing more would be heard.

Egyptian officials said to-day that the decision by the commandos to move in had been taken because no progress toward freeing the hostages was being made in the negotiations between the two terrorists and the Cyprus government. It was feared that an agreement had been reached to allow the aircraft to take off again.

It was stated here that it was thought a rescue operation might be beyond the capabilities of the Cypriots and that they would welcome Egyptian assistance. During the two hours before the attack Egyptian and

Cypriot authorities were said to be in regular contact.

Egyptian anger has also been intensified because they failed to capture the two terrorists from whom they urgently want information about the possible extent of further planned attacks. The Government here will press for extradition but are privately extremely doubtful now whether they will be successful.

The Egyptian Press was meanwhile virulent in its attacks and condemnations. While still suggesting that the commando operation had been successful and that it was Egyptian troops who successfully stormed the aircraft and freed the hostages, the newspapers launched vigorous editorials accusing the Cypriots, the Palestinians and the Syrians. To some papers the whole affair was engineered by the Syrians in collusion with extremist Palestinians and a passive Cyprus Government. Only after the Egyptian commandos had taken off for Larnaca did it become known that a secret deal had been reached between the Ba'athist regime in Damascus and the Cyprus Government to hand over the terrorists to the PLO. "We accuse the Cypriots. We call on all countries in the world to condemn terrorism and not to allow the Cypriots to get away with it," said Al Akhbar.

Mr. Sadat to-day conferred with Vice-President Hosni Mubarak at Ismailia having already despatched the Minister of State at the Foreign Ministry, Dr. Boutros Ghaly to Nicosia to arrange for the release of the surviving Egyptian troops, and to seek the extradition of the two terrorists.



An Egyptian air force Hercules destroyed by Cypriot national guard gunfire at Larnaca airport.

Egyptian troops not prepared for objections by Cypriots

BY MICHAEL TINGAY AND ANDREAS MADHUPAPAS IN NICOSIA, FEB. 20

THE BLOODY fiasco at Larnaca, including an Egyptian C-130 members of the Cyprus Government. They were made aware of the successful negotiations for the release of the hostages but were not told the secret terms and the promise of passports.

Mr. John Christodoulou, Cyprus's Foreign Minister, it is claimed here, told the Ambassador that the Egyptians had "in permission to land with a commando force and on condition to carry out any operation in Cyprus soil." He is said to have warned them that an attempt would almost certainly result in the deaths of the hostages, whose lives had been guaranteed in the Government's negotiations with the gunmen.

The Egyptian military attaché who President Kyprianou subsequently asked Cairo to recall tried to drive in his car as the DCS was prevented from entering the hotel and left Cyprus before the killing. A crucial part of the Cypriot version is that the military attaché and the ambassador were warned more than 48 hours that if Egyptian soldiers embarked on an attempt to storm the plane, the national guard would open fire. It was pointed out that they would be violating Cypriot sovereignty and the Egyptians were reminded that Cyprus security forces had the men and fire power to mount an attack on the host plane, should the Government so wish.

At this point, a chartered Le Jet of Jordan's Arab Wings Airlines, containing American journalists, landed and landed a half hour by a helicopter. The attaché reached the Egyptian plane, whose commander promptly sent a jeep down the ramp which sped toward the DCS, firing directly at the cockpit where the four Cypriot hostages were seated. The national guard then opened fire.

During the confusion, Egyptian hostage, Kemal Bahaddin, emerged from the DCS to confront the Egyptian commander, screaming at him: "I am an Egyptian. Tell your men to cease fire." He told the commander: "Tell your Egyptians were on board, in the building, taking up machine guns according to witnesses on that side of the airport. It is not known whether these men were firing at the building or not."

When all was over, the 12 hostages, crew and two gunmen emerged unscathed. Editorial comment, Page 16

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OTHER EUROPEAN NEWS

Mounting apprehension in Lisbon at IMF demands

BY JIMMY BURNS

LISBON, Feb. 20

PORTUGAL'S SECOND constitutional government will discuss the "intrusiveness" of the IMF economic programme with the opposition parties this week, against a background of mounting apprehension as to the stiffness of the terms that may be imposed when the International Monetary Fund team comes to Lisbon next month.

O Diário, the Communist leading newspaper plans to reproduce to-morrow the full text of the letter of intent signed by the Italian government last April, during its negotiations with the IMF. The letter is prefaced in

to-day's edition as representing the "intrusiveness" of the IMF which was "catastrophically" Italy and led to "grievous" increased political and social tensions.

Fears about the coming of the IMF team have been fuelled by the fact that the IMF team's main opposition party, the Social Democrats (PSD), Portugal's main opposition party, declared in a mass meeting that the Government's policy speech that the Government was in danger of "sacrificing Portugal to foreign interests."

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EUROPEAN NEWS

Left-wing parties open poll
ce by trading salvos

DAVID CURRY

PARIS, Feb. 20.

RENCH general election on the 28th, the first round of the poll will be a head-to-head contest between the Communist Party and the Gaullist Union for the Republic. The Communist Party, led by Georges Marchais, is the largest of the left-wing parties, while the Gaullist Union, led by Valéry Giscard d'Estaing, is the largest of the right-wing parties. The election is expected to be a close one, with the Communist Party having a slight edge.

THE
FRENCH
ELECTIONS

The Communist Party, which has been the dominant force in French politics since the 1960s, is expected to win a second round of the election. The Gaullist Union, which has been the dominant force in French politics since the 1960s, is expected to win a second round of the election.

nions seek common ground

DAVID WHITE

PARIS, Feb. 20.

COMMUNIST leaders of the largest French trade union, the CGT, are seeking common ground with the Gaullist Union for the Republic. The CGT, led by Georges Marchais, is the largest of the left-wing parties, while the Gaullist Union, led by Valéry Giscard d'Estaing, is the largest of the right-wing parties. The election is expected to be a close one, with the Communist Party having a slight edge.

ISH ENTRY TO EEC

adrid chooses a mediator

BY ROBERT GRAHAM IN MADRID

EATION of a new designed to deal with Spain's entry into the EEC. The new design is expected to be a close one, with the Communist Party having a slight edge. The Gaullist Union, led by Valéry Giscard d'Estaing, is the largest of the right-wing parties. The election is expected to be a close one, with the Communist Party having a slight edge.

A SECOND round of U.K. Spanish talks over Gibraltar, with the participation of Gibraltar leaders, is due to take place in early March, according to a British Foreign Office spokesman. The Gibraltar Chief Minister, Sir Joshua Hassan, and the leader of the Opposition, Mr. Maurice Xiberras, will be taking part. It is likely they will first hold a meeting with the British Foreign Secretary, Dr. David Owen, as has previously been the practice.

any of the opposition parties has sought to do. Until now Spanish entry into the Community has been viewed rather simply as part of the ticket that went with a restoration of democracy. Domestic coordination of a negotiating position is likely to be a highly delicate task. Before the appointment there was considerable infighting as to how Mr. Suarez should approach the EEC issue. The foreign Ministry argued that since this represented the most important initiative for Spain in the near future, it should be controlled from the Foreign Ministry who already had experience of dealing with Brussels. The Ministry of Finance, as the Economic overlord, argued that since the main technical decisions were economic, it should have an important degree of control. In the end, Mr. Suarez and the King have preferred a solution which hopefully will enable a

U backs Canaries independence

OWN CORRESPONDENT

MADRID, Feb. 20.

DIPLOMATIC efforts in the Liberation Committee has been pressing for the OAU to support MPALAC. However, this is the first time that the word "material" support has been included in a resolution. The committee consists of Algeria, Guinea (Conakry), Libya, Nigeria and Senegal. Almost a month ago, the King's father, Don Juan, was sent on a private mission to Tripoli to discuss with the Libyan authorities the question of their support for MPALAC, hoping that the Libyan leadership could be persuaded to play down the issue of the Canaries.

IG-Metall
talks near
deadlock

By Adrian Dicks

BONN, Feb. 20.

WAGE NEGOTIATIONS in the West German engineering and metal fabricating industries were reported to-day to be close to deadlock in five of the main bargaining regions into which the country is divided.

On the side of the majority, a sort of grumbling peace has broken out, though it is reported that President Giscard d'Estaing is irritated at the refusal of Raymond Barre, the Prime Minister, to place himself unequivocally at the head of the centrist faction in opposition to the Gaullists. In Paris, the main Socialist poster is showing M. Mitterrand declaring victory through the ballot box. Near the Madeleine it has got juxtaposed with a poster advertising Emmanuelle 2 with the words "If you think you've seen it all you have only seen a half," a comment the majority would not doubt apply to the common programme.

The Republicans call themselves the party of the right choice, above a poster showing a misty landscape of fields or rooftops illuminated by a tricolour rainbow no doubt representing the light cast by Chairman Giscard's thoughts. The Gaullists are made of more fighting spirit: their giant meeting was advertised by one of the sculptures on the Arc de Triomphe showing an embattled goddess racing off to war with sword and chariot.

All this paper is costly, but for those who win 5 per cent of the votes cast, the cost of paper and printing and propaganda will be reimbursed by the State.

Honecker complains about
Comecon industrial policy

BY LESLIE COLT

EAST GERMANY'S leader, Herr Erich Honecker, has issued a rare public complaint over Comecon's policy of industrial specialisation, which has narrowed the range of products made in East Germany.

The Communist Party chief and head of State seldom wavers from the Russian line on any issue. It has taken a matter of vital economic importance to bring his criticism into the open. "Nobody has the right to halt production of GDR (East German) goods," Herr Honecker has told East German Communist Party officials, "until the products we have to import have not been tried and tested in our country, and as long as commercial import agreement and planned deliveries have not been guaranteed."

He noted that "proposals were made and carried out which caused gaps in supplies to the



Herr Erich Honecker

Move to
make bland
conclusion
in Belgrade

Switzerland yesterday proposed that the European Security Conference in Belgrade should end without a substantial final declaration, four reports from Belgrade. Speaking at a plenary session of the 35-nation gathering, the chief Swiss delegate, Mr. Edouard Brunner, said that diplomats should be realistic in this final stage. It was unrealistic to seek a substantial final document or declaration, because there was no prospect of its being accepted by the Soviet bloc, he said. This statement reflected the privately expressed views of many western and neutral delegations.

The Soviet chief delegate, Mr. Yuri Voronov, yesterday reiterated that Moscow would not accept proposals by western, neutral and non-aligned countries which went deeply into sensitive questions. These include humanitarian issues, east-west exchanges of information, and a thorough evaluation of progress since the 1975 Helsinki accord.

Meanwhile in Vienna, a British Foreign Office Minister, Mr. Frank Judd said yesterday that Britain wants the conference to end with a meaningful statement on human rights. "We would be very unhappy to see meaningless wording which deviates from the concept of security," he said.

Conference on brink, page 10

Polish censorship

Senior Polish officials here have admitted that censorship restrictions may be excessive, and have promised that criticism of present censorship policies will be answered. Christopher Bobinski writes from Warsaw. The statement by the Culture Minister, Mr. Janusz Wilhelm, came in response to a recent protest against censorship sent to the Polish Premier, Mr. Piotr Jaroszewicz, by the Polish PEN club of writers, and was made last week at a meeting of the heads of unions of artists and writers. Mr. Wilhelm told the meeting of a proposal to set up under the auspices of the Culture Ministry a committee made up of writers and politicians which would act as a kind of appeal tribunal for censorship grievances.

'Ugly German' image goes

BY JONATHAN CARR

BONN, Feb. 20.

WEST GERMANS were today treated to the unaccustomed and gratifying revelation that most foreigners do not really see them as "ugly Germans," after all. On the contrary, their Western neighbours and the United States appear to have an almost embarrassingly high opinion of them, believe the Federal Republic has a good record in protecting human rights—and even support German reunification in principle.

All this, emerging from an opinion poll whose results were made public to-day, may seem a little too much to take at one time. It amounts, as one newspaper indicated, to a transformation as great as that of the proverbial frog into a prince. There could even be some suspicion that because the poll was commissioned by the Federal Government's press office, its suggested the Nazi past.

Asked what reservations could be expressed about the Federal Republic, an average of 30 per cent of all those questioned suggested the Nazi past.

Irish union 'no
to wages plan

By Our Own Correspondent

DUBLIN, Feb. 20.

THE EXECUTIVE of Ireland's biggest union, the Irish Transport and General Workers' Union (ITGWU), has recommended that its members reject the recently signed national wage agreement on which the Government has pinned much of its hopes of curbing inflation and reducing unemployment. The union's objection is not to the pay increase of 8 per cent, which the deal allows but to the restrictions on strike action included in it.

The ITGWU feel these go too far in curbing a union's own right to decide on its tactics. The executive is also believed to be unhappy about the length of the agreement — 15 months instead of the usual 12 — and to the minimum figure of £3.50 a week, which it feels is inadequate for lower-paid workers.

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Mr John Burgess,
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OVERSEAS NEWS

U.K. must adjust to new role, says Judd

By David Housego

BRITAIN would have to leave many of her traditional industries to the third world and concentrate on those which had a high input of skills, Mr. Frank Judd, Minister of State in the Foreign Office, said in Vienna yesterday.

He declared that such redeployment across national boundaries was necessary, though adjustment by Britain to a new economic role was not easy. Heavy import controls or drastic cuts in overseas aid, he believed, were very short for the answers.

Mr. Judd declared that it would become increasingly necessary for industrialised nations to come to terms with a number of the third world's objectives even if there were doubts about the specific mechanisms proposed. Unless this change of heart took place, the criticism made by the West of such mechanisms would inevitably be greater as they became more and more entrenched.

Remarks seemingly aimed at displacing Britain's image as one of the "hawks" among industrialised nations, Mr. Judd said that it might have to be accepted that a blurring of the traditional divisions between primary producers and industrialised nations would call for changes in international institutions.

Kuwait talks on plant

By Richard Johns

NEGOTIATIONS BEGAN at the weekend between the Kuwait Government and some 20 potential customers for the output of the state-owned \$1.2bn. Natural Gas Liquids plant, which is scheduled to come on stream in the second half of this year.

A number of potential customers, particularly from Japan, are said by Kuwait officials to have expressed keen interest in purchasing the output. But talks are taking place under some uncertainty as to exactly how much propane, butane and natural gasolene there will be for sale.

Total design capacity of the three identical units is put at 10m. barrels a day of propane, 55m. b/d of butane and 4m. b/d of natural gasolene.

Among the companies negotiating are reported to be Gulf, Shell, Continental, Phillips Petroleum, Northern Liquid Fuels, Texas Eastern, Bridgestone, Idemitsu Kosan, Kyodo, Maruzen, Mitsubishi, and Marubeni.

Japan signals resumption of talks on China treaty

BY CHARLES SMITH, FAR EAST EDITOR

TOKYO, Feb. 20

JAPAN'S ambassador in Peking has been instructed to prepare for an early resumption of negotiations on a treaty of peace and friendship with China, Mr. Takeo Fukuda, the Prime Minister, said today.

This is the first on-the-record official indication that Japan expects to sign the long-pending treaty some time in the fairly near future. Negotiations have been suspended since 1957, ostensibly because of disagreement about the "anti-hegemony" clause China wants to include.

This would commit both signatories to oppose attempts by third countries to establish hegemony in the region (intended by China as a dig at the Soviet Union).

Another, at least equally serious obstacle has been opposition to the treaty by the Taiwan lobby within Japan's ruling Liberal Democratic party.

Mr. Fukuda's statement today came after a week-end of consultations with pro- and anti-Taiwan sectors of the Liberal

Democratic party, an indication that he may at last have achieved a political consensus on the treaty issue.

The Japanese ambassador in Peking, Mr. Shoji Sato, met China's Vice-Foreign Minister, Mr. Han Nien-Lung, last Tuesday to discuss the prospects for reopening the treaty negotiations.

Discussions on joint development of Siberian resources have yielded only meagre results, while negotiations on a Sino-Japanese peace treaty have been blocked by the Soviet refusal to discuss Japan's claim to four small islands off the north coast of Hokkaido.

In pressing forward with the China agreements Japan has continued to claim that it is impartial in the Sino-Soviet dispute and wishes to be equally friendly to both countries.

The real state of affairs would seem to be that a special relationship is developing with China while relations with Russia grow steadily cooler.

Bill will abolish 'Gandhi distortions'

BY K. K. SHARMA

NEW DELHI, Feb. 20

THE INDIAN Government plans to "abolish the distortions" in the constitution introduced by Mrs. Indira Gandhi. This will be done through a bill to be passed in the budget session of parliament, which began today, following a week-end of opposition parties, including the Congress.

This was announced today by the Indian President, Mr. N. Sanjay Reddy, in his opening address to both houses of parliament. He said that there was

"in particular, a need to build bulwarks against any possible future bid to use the constitution to negate and subvert the basic principles of democracy."

There have been continuing doubts as to whether the Government would fulfil its promise to remove the "distortions" to the constitution introduced by Mrs. Gandhi.

Mr. Reddy also announced the government's intention to repeal the notorious Maintenance of Internal Security Act (MISA) under which thousands were detained without trial by Mrs. Gandhi. But he indicated that some kind of preventive detention is to be provided for, which means the government has re-

jected the widespread demand for total abolition of such draconian powers.

The President pointed to many positive aspects of the Indian economy including the 5 per cent. growth rate achieved in 1977-78, compared to 2 per cent. in the previous year. Agricultural production had made up lost ground and food grain production during the year was expected to be more than 115m. tonnes. Inflation has been checked and prevailing prices are no higher than in March, 1977, Mr. Reddy said.

He announced the government's decision to revert to the strategy of development by terminating the fifth five-year plan a year in advance and launching the sixth plan from April, 1978, in accordance with the government's policies.

"The primary objectives would be the removal of unemployment and substantial underemployment in the shortest possible time, increasing the availability of basic goods and services to the people in the lowest income groups in the same period, a significant reduction in disparities of income and wealth and steady progress towards technical self-reliance," the President said.

Police in the township also report a much lower level of disturbances from idle children, as many are now either back in school, or have been sent to boarding schools in their tribal homelands, or have gone to look for work in Johannesburg.

Soweto schools boycott relaxes

By Quentin Peel

JOHANNESBURG, Feb. 20

THOUSANDS of Soweto school children who were staying away from school in protest against the system of segregated education in South Africa have now registered to return. It was estimated today that a majority of the township's secondary schools have now reopened since the boycott which began last July has petered out.

The return of the school children still brings the total of pupils in secondary schools nowhere near the 27,000 students last year, but it is in marked contrast to the successful boycott of the Government's community council elections which took place at the weekend, and in which only 492 voters turned out.

Police in the township also report a much lower level of disturbances from idle children, as many are now either back in school, or have been sent to boarding schools in their tribal homelands, or have gone to look for work in Johannesburg.



Gen. Zia ul-Haq

PAKISTAN FACES LENGTHY MILITARY RULE

Army politics and Mr. Bhutto remain the keys to the future

BY DAVID HOUSEGO, RECENTLY IN PAKISTAN

FOR THOSE who lived through the rioting last year that turned many of Pakistan's major cities into ugly battlefields, there is now at least the comforting relief of returning to the familiar landmarks of daily routine.

Schools and universities have reopened, families at week-end picnics in the public gardens that the army used for so long as a bivouac for troops and tanks, shopkeepers no longer live in fear of demonstrators hurling stones through their windows, factories are back at work—though jobs are fewer because employers have laid off surplus labour.

But beyond this immediate sense of stability is the foreboding that the country is in for another protracted period of military rule, making an even deeper crisis than before the army took over in July. The most visible reminder of the failure to resolve the divisions is the cordon of armed guards around the Lahore High Court where Mr. Bhutto, the deposed Prime Minister, is on trial for murder—a charge that makes him ineligible for office.

The guards are necessary, because Mr. Bhutto for all his many warts, is still the tallest politician in the two main provinces of the Punjab and Sind and the likely victor of any new electoral contest. The army cannot risk his return to power because they fear retaliation against those who overthrew him.

Thus any re-run of the March 1977 general election—the way of deciding whether Mr. Bhutto's Peoples Party or some grouping of the rival Pakistan National Alliance should run the country—is for the moment unthinkable. The only politics that matters is the manoeuvring within the army.

In this uneasy situation, the business community is holding back from investment. Better rice and cotton crops this year with some pick-up in manufacturing production after a shock in industry last year mean that the economy is likely to register what appears on paper as an impressive growth rate of 6 per cent. for fiscal 1977/78.

In practice the country teeters on the edge of insolvency with the current account deficit expected to widen a further 8 per cent. to \$1.1bn. and the budget deficit rising as well—largely because Mr. Bhutto would over-spend while looking to his creditors to keep his government afloat.

The army, reacting to civil service advice, has begun pruning back expenditure and raising new taxes. But there is a limit to the unpopularity it can risk. Already there is grumbling at the increase in irrigation duties—a long needed measure—and at the laying off of factory workers

to lower production costs. Both measures, by the way, are the most bitter at the moment, but they are the backbone of Mr. Bhutto's support.

More important than these immediate political and economic difficulties is the humiliating sense of national failure—surviving in a streak of populist hollows and illusions, but for the fourth time since independence the country has drifted into military rule because of an inability to resolve a political deadlock. As on such occasions in the past there is a turning back to Islam as a nation that other-wise seems unsure of its identity.

This time, however, regrets that Pakistan has not followed the Islamic precepts on which it was founded have been accompanied by a frenetic determination to put them into practice by making them the basis of the new constitution, and by enforcing prohibition and drawing closer to Saudi Arabia and the other Islamic states.

The backlash, worrying to some, has swept away the secularism that Mr. Bhutto tried quiescently to press in the new constitution, which Mr. Bhutto has traditionally projected himself as the guardian of the Islamic heritage, seems to feel an opportunity to reclaim its reputation and wipe out the disgrace of the surrender of 99,000 Pakistani troops to India after the fall of Dhaka in 1971.

It is among the army officers that there are the few signs of confidence about the present situation. General Zia-ul-Haq, who presides over the regime as Chief Martial Law Administrator (CMLA) has a soldier's honesty and faith that from cold intentions, good will flow. He believes that once he has removed the "dirt" from political life—including Mr. Bhutto, many of his former colleagues and a lot of the opposition—worthy men will arise to compete for office in a new election. Politics does not work with that simplicity in other nations, and is certainly unlikely to in Pakistan.

Though only faint echoes of the disputes within the army are heard outside, it does seem that a powerful group of officers feel this way is naive, and that the military would do better fully running the show themselves rather than trusting in politicians who have let them down before. A smaller group, however, feels that the army should pull back to barracks.

So far General Zia has continued these rivalries—including personal jealousies—at his own peril. He has shown remarkable skill in the unpopularity it can risk. Already there is grumbling at the increase in irrigation duties—a long needed measure—and at the laying off of factory workers

to lower production costs. Both measures, by the way, are the most bitter at the moment, but they are the backbone of Mr. Bhutto's support.

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It is partly because of the frequency with which he has taken to the streets, and the fact that CMLA stands for "Contrary to my last announcement" common coin among his headquarters staff in Rawalpindi.

General Zia has scant respect for senior politicians of the Peoples Party and the PNA, saying that he finds them "largely ignorant and ill-informed." The politicians do not have much faith in him. Wali Khan, the Pathan leader and the only figure of stature beside Mr. Bhutto, is giving tacit support to the military, but mainly in the hope that they will destroy Mr. Bhutto, for whom he has a deep personal antipathy, once and for all.

Air Marshal Asghar Khan, once the effective leader of the PNA and now running his own party, sees the army standing between him and the premier, Mufi Mahmood, the president of the PNA, is quietly helping to discredit the military leadership by implying that General Zia is ready for some deal with India.

But in the still eye of the storm remains Mr. Bhutto, who can claim to have brought down three Pakistani regimes—President Ayub, General Yahya's and his own—and now threatens to present one. General Zia's hope is that under the weight of charges being levelled against him over corruption and the misuse of power, Mr. Bhutto's popularity will vanish into thin air.

So far Mr. Bhutto has been able to grow in size. The power remains in the way that he still holds over the Punjab and Sind makes the army and his political opponents all the more determined to put him away.

Removing Mr. Bhutto from public life however is not the same as ridding the country of Bhuttoism, any more than the removal of General Peron laid low the ghost of Peronism. To millions of Pakistanis, Bhutto is the one leader since independence who has talked directly to them and has enquired the cause of the poor. His charisma has been increased by the ineptitude with which the army handled his arrest and the doggedness with which they are now pursuing him through the courts.

Even in the Lahore political arena, hostile to Mr. Bhutto, grave doubts about the fairness of his present trial for murder. Because of the blow to the army's prestige if he was acquitted—even though the trial originated as a private case—the pressures on the court are inevitably great. On the other hand it is hard to envisage that the army would take all the risk of hanging him if that was the verdict.

But what to do with Mr. Bhutto

remains a question that eluded them in Bangladesh.

Argentina, Chile set up talks on dispute

By Robert Lindley

SANTIAGO, Feb. 20

THE POSSIBILITY of armed conflict between Chile and Argentina over the dispute about the Beagle Channel boundary near Cape Horn may have been averted today when the Chilean President, Gen. Augusto Pinochet, and the Argentine President, Gen. Jorge Rafael Videla, met at Puerto Montt in southern Chile, and signed a document establishing a system of prolonged negotiations.

Since the first summit meeting on the dispute between the two countries was held at Mendoza, Argentina, in 1976, the Chilean case has been rejected by Argentina. The Buenos Aires Government maintained that the arbitration court had not interpreted the 1881 boundary agreement properly, had exceeded its brief, had contradicted itself, had committed geographical and political errors and, in general, had acted unjustly.

The document signed by Presidents Pinochet and Videla today at Puerto Montt calls for negotiations in three stages. In the first stage of 45 days, it is foreseen that both Governments will name members to a committee which will propose measures to promote conditions for harmony in the Beagle Channel area.

In the second stage, it is calculated that another Chilean-Argentine committee will propose guidelines to delineate maritime space in the area, and will suggest ideas for Chilean-Argentine co-operation in exploiting the natural resources in the area, and also in Antarctica.

It is provided that in the third stage, the negotiators will make proposals to the two Governments so that they may determine ways of instrumenting agreements.

There are no non-union mine workers in the area, and also in Antarctica. It is provided that in the third stage, the negotiators will make proposals to the two Governments so that they may determine ways of instrumenting agreements.

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ONE MAN'S COAL STRIKE

Legacy of history is root of miners' determination

BY STEWART FLEMING IN DANVILLE, WEST VIRGINIA, FEB. 20

DANVILLE, W. Virginia, Feb. 20

HE SAT down in the next seat as the plane was leaving Charleston, West Virginia. It turned out that three years ago he had bought a coalmine, a small one, 300-ore miners and \$7m. of investment.

A graduate of a top university on the east coast in his early 30s, casually dressed in a crew-neck sweater and cord trousers, he had studied peasant economies at college. It came in handy now that he was working with Appalachian miners.

"In a few weeks I'll have to get the security guards and sub-machine guns in again," he remarked with a smile. "The tone was so matter-of-fact that it took a minute to sink in. His mine was non-union. It had been closed by United Mine Workers' union (UMW) pickets. But now the two-month coal strike was threatening the business's survival. He had to get the coal moving again quickly and as in the wildest UMW strikes of July and August of last year, the only way to do it was to be ready to meet violence with violence. To call in what union men still call "company" men to try and keep the non-union miners working."

Beecher White is a miner. He has been a miner all his life and because I was from England he told me his wife drinks tea. Perhaps in Danville, West Virginia, you have to be a little bit eccentric to drink tea.

We were sitting with a dozen or so of his colleagues in a dusty and drab little office which is the United Mineworkers of America, Sub-District 2, District 17 headquarters. Danville is about 40 miles from Charleston, deep in the hills just a few hours' drive from the Chesapeake and Ohio's 100-or-so empty coal cars waiting patiently for the strike to end.

There are no non-union mines in Boone County, the group agreed, and there was no mistaking the pride or the menace in their voices. There are no non-union coal trucks either not non-union railways ready to take a chance and move them. You have to be a little bit eccentric to drink tea.

Beecher White is an immutable mistrust of West Virginia's governor, although he would surely walk past him in the street without a flicker of recognition. On April 20, 1914, 1,000 miles and an epoch away, in a small town called Ludlow, Colorado, local militiamen opened fire on a tented village of miners' families at the Colorado Fuel and Iron Company. It was a bloody, day-long battle, they killed 40 striking miners, women and children, and injured countless others.

Last week, Beecher White remembered Ludlow although he was not even born then. The mine was a J. D. Rockefeller interest and the oil baron's great-grandson Jay Rockefeller is West Virginia's governor.

I went to West Virginia to try to find out how after two months on strike without wages or union strike funds, the miners were surviving and how much longer they could last out. These same miners had only just finished a 10-week strike in July and August last year. So for four of the last 10 months, they had not worked.

Normally, a good miner will earn some \$16,000 a year at a UMW pit. But the answer to the question is not just to be found in wage slips. There is much criticism of the UMW miners these days particularly those in isolated districts like Appalachia. They are, you will be told, living in another age when it was difficult to move out of one of these narrow valleys to a job because mining was all there was in West Virginia.

As the mine-owner remarked during our flight, that has changed now. The days when miners were as he put it, "more than slaves taking their wages and handing them back to the mine-owner at the company's store and living in a house owned by the company, are gone."

To-day's miners can move to another town or another employer if he does not like the one he has got because coal in Appalachia is booming again. Even today as the strike continues, major companies are opening three or four mines which will eventually employ over 1,000 miners each in the region around Danville.

The stream of history is shallow across much of America but here in coal country where grandfather, father and son have followed each other into the mines, it runs slowly. Legend and tradition account for much of the miners' stubbornness and if legend has created an illusion, it is a powerful one.

THE UNITED Mine Workers' union announced yesterday that it has reached a tentative agreement with the Gulf Oil subsidiary, Pittsburgh and Midway Coal (P and M). This raised hopes of a breakthrough in the 76-day-old U.S. coal strike, our New York correspondent writes.

P and M is not a member of the Bituminous Coal Operators' Association, which represents most of the major coal companies in dispute with the union. But it is hoped that the easier contract terms agreed with P and M will provide a pattern for a settlement throughout the industry.

Efforts are underway to convene the 33-man bargaining council of the UMW. If the council agrees to the P and M settlement, then the companies in the association could hope to have a similar offer accepted, and that would remove what is seen as the biggest obstacle to a settlement. A new contract for all UMW pits would still have to be ratified by the 160,000 UMW members.

Although hard-core coal companies will be reluctant to offer similar terms to those of P and M, they will come under intense political pressure from the Carter Administration, which is facing its most difficult domestic crisis since taking office in trying to bring about an end to the coal strike.

White says: "On a scale of one to 10, wages come about five." To-day's miners are well paid. Thus, the room agrees that the \$100 being offered to miners as a "bonus" when they go back to the mine is a bribe to get their votes for the contract. So they look instead at the decision to dismantle the union's health and welfare funds, which since the late 1940s have provided members of the UMW with unrivalled free medical care and they see the thin end of the wedge. The funds are under the terms of the current offer to be handed over to the company to run the benefits guaranteed. In return for this guarantee, the coal companies want labour peace.

But Howard Green, secretary of the company-operated health and welfare funds, the predecessor of the next summer negotiations which will not be between the union and the coal companies but between the coal companies and the health and welfare funds, says: "The contract is designed to spell the end of the union."

There are other elements in the contract, of course, which the miners' health and welfare funds are under the terms of the current offer to be handed over to the company to run the benefits guaranteed. In return for this guarantee, the coal companies want labour peace.

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WORLD TRADE NEWS

K. rotor makers dispute 2m. Canadian repair bill

HN LLOYD IN LONDON AND JAMES SCOTT IN TORONTO

Ontario Hydro's largest generating station is in dispute between Ontario Hydro and Parsons, the U.K. company that made the rotors.

Ontario Hydro said the repair bill for the rotors, estimated at about \$2m, should be paid for by Parsons. Parsons, the U.K. company, has said it will not pay for the repairs. Parsons said it was not responsible for the rotors, which were made by Parsons in the 1950s. Parsons said it was not responsible for the rotors, which were made by Parsons in the 1950s.

British marketing attacked

Y DAFER

U.K. exporters of agricultural products have been attacked by the U.K. government for their marketing. The U.K. government has said that the exporters have been using unfair marketing practices. The U.K. government has said that the exporters have been using unfair marketing practices.

Australia signs for big oil exports to Japan

LURENCE STEPHENS

SYDNEY, Feb. 20

Australia has signed a contract to supply oil to Japan. The contract is for a period of 10 years. The contract is for a period of 10 years. The contract is for a period of 10 years.

Africa supplies Israel

ANTIN PEEL

JOHANNESBURG, Feb. 20

Africa has supplied Israel with oil. The oil was supplied from South Africa. The oil was supplied from South Africa. The oil was supplied from South Africa.

Philippines \$1.8m. loan. The Philippines has received a loan of \$1.8m from the U.K. government. The Philippines has received a loan of \$1.8m from the U.K. government.

Jordan to offer phone project

WICKS

AMMAN, Feb. 20

A contract worth \$5m. to improve telephone lines in Jordan's capital, Amman, will be put up for international tender next month. The contract is for a period of 10 years. The contract is for a period of 10 years.

Lak opens in Dubai

A MAY

DUBAI, Feb. 20

A new Middle East and photographic equipment centre has opened in Dubai. The centre is for a period of 10 years. The centre is for a period of 10 years.

Financing agreed for HK power contract

By Lynton McLain, Industrial Staff

The £100m. power station export contract for Hong Kong, announced last month, will be financed by the U.K. government. The contract is for a period of 10 years. The contract is for a period of 10 years.

The loan, managed by J. Henry Schroder Wagg, is the largest foreign currency facility ever backed by the Export Credits Guarantee Department. The loan is for a period of 10 years. The loan is for a period of 10 years.

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Dell in Poland for talks

BY CHRISTOPHER BOBINSKI

WARSAW, Feb. 20

MR. EDMUND DELL, Secretary of State for Trade, arrived here today for a three-day visit that will include talks with Mr. Jerzy Olsewski, Polish Minister of Foreign Trade, and Mr. Henryk Kisiel, Finance Minister.

The talks will cover progress on big projects on which British companies are engaged, such as the Ursus tractor factory development by Massey Ferguson Perkins and the Wloclawek PVC plant by Petrocarbon, also trade prospects for the future.

The Polish side will raise wider access to the British market against a background of a mutual trade turnover of £374m. in 1977 and a Polish trade deficit of £28m. in that period, according to British figures.

That means a cut in the Polish trade deficit of £11m. over 1978. According to Polish official figures, the trade turnover is £333m. and the 1977 deficit £287m. These figures, however, have as their base goods bought in Britain rather than British-made goods, which are the basis for British figures.

Recent British restrictions on steel imports will be mentioned by the Poles. They will emphasise that Poland's steel imports from the U.K. exceed her steel exports.

Other disputed goods are electric motors, shoes, shirts, beef and tinned food. The Poles will also be pressing for a system of quantity quotas rather than value quotas if restrictions are to be imposed.

Foreign trade officials estimate that discriminatory customs duties on Polish products are costing Airways.

Poland \$600m. a year in export third markets, and delays in British supplies to the Wloclawek PVC project. No big decisions are expected as a result of the talks and the officials feel that Britain is a good trade partner and that up the matter of further credits, trade will develop.

Other subjects that will be mentioned will be co-operation in producing steel-making equipment, with a view to exports in progress at the Ursus project.

Singapore cargo handlers

BY H. F. LEE

SINGAPORE, Feb. 20

THE PORT of Singapore Authority (PSA) together with six international airlines has set up a joint venture cargo handling services company.

Known as Changi International Airport Services (CIAS) the company will initially invest about \$540m. in new facilities at Singapore's new Changi international airport.

The facilities include a \$512m. cargo terminal, cargo and aircraft handling equipment and a self-contained maintenance base to service its own equipment, vehicles and plant. The new Changi airport is expected to commence operation in 1980.

PSA holds 74 per cent. of the equity of the new company while the remaining 26 per cent. are spread among the six airlines: KLM Royal Dutch Airlines, Lufthansa, PT Garuda Indonesia, Garuda, China Airlines, Sabena, and Trans Mediterranean Airways.

The chairman of CIAS, Mr. Chung Kek Choo, who is also the PSA director for management and general services, said that the authority's participation in the venture is a logical step in the development of inter-modal transportation of freight which he said is likely to develop rapidly in the foreseeable future.

Present ideas along this line indicate that goods in the future may tend themselves to being transported in containers by air to major centres like Singapore and transhipped by sea through the region, he said.

CIAS will compete directly with another Government-owned air cargo and aircraft handling enterprise, Singapore Airport Terminal Services (SATS). A wholly-owned subsidiary of Singapore Airlines, SATS currently handles the bulk of air cargo and aircraft servicing at the Republic's existing Paya Lebar international airport.

Canadians to relax steel duties

By Victor Mackie

OTTAWA, Feb. 20

AN ISSUE which had the Canadian Cabinet split for weeks has finally been resolved by the Government's announcement of a "limited and temporary" remission of anti-dumping duties on imports of wide flange steel.

The Government said over the week-end that a limited and temporary remission of provisional anti-dumping duties on imports of wide flange steel, shapes from Britain, Japan, France, South Africa and Luxembourg would be permitted until June 29. The remission of the duties imposed last September 29 will apply for nine months.

The Government action follows strong representations from provincial governments and Members of Parliament over the adverse effects the duties would have on the fabricators and builders using such products. The provinces—especially British Columbia and Alberta—said the steel fabricating industry in some areas would face difficulty because of a slowdown in the construction industry.

S. Korean order

Sydney Steel, the Crown-owned Nova Scotia steelmaker, has won an order from South Korea's Pohang Iron and Steel for 66,000 tons of basic steel. The Korean company has taken an option for a further 22,000 tons and full value of the contract, including freight, would be about \$C14m.

THE NEW PENSION.

Something worth paying for.

It's a fact that a lot of people suffer too big a drop in income when they retire.

That's why we need the new pension scheme that starts in April this year.

It will mean that in future millions of employees will be able to retire on half pay.

Isn't that something worth paying for?

The 20 best years.

The new scheme will give you two pensions.

The basic retirement pension continues, but on top you will get a second pension based on your 20 best earning years under the new scheme.

The second pension will come either from the state or from your employer and will start being paid next year.

Both pensions will be fully protected against inflation, and will still be available to you no matter how many times you change jobs.

Better deal for women.

Women will still get their pension at 60 and (unless they have already opted to pay reduced rate contributions) they will get the same benefits as men, and pay the same contributions.

A woman can leave her job to bring up a family without losing her right to a basic pension.

What you will pay.

This table summarises the new contributions you'll pay from 6 April (the present rates, where different, are in brackets).

The new rates are listed fully in leaflet NI208 obtainable from main Post Offices and Social Security offices.

Class 1 contributions	Employees	Employers
Standard rate	6.5% (5.75%)	10% (8.75%)
Contracted-out rates:		
On first £1750 a week	6.5% (5.75%)	10% (8.75%)
On earnings between £1750 and £120 a week	4% (5.75%)	5.5% (8.75%)
Reduced-rate for some married women and widows	2%	As above (standard or contracted out)
Men over 65 and women over 60	NIL (some 5.75%)	10% (8.75%)
Lower and upper earnings limits £1750 and £120 a week (£15 and £105).		
Employers' contributions do not take account of the NI Surcharge.		
Class 2 contributions: self-employed £1.90 a week (£2.55/£2.66)		
Small earnings exception from liability £950 a year (£875)		
Class 3 voluntary contributions £1.80 a week (£2.45)		
Class 4 contributions: self-employed 5% (8%) on profits or gains between £2,000 and £8,250 a year (£1,750 and £5,500)		

If you already draw a pension.

The scheme doesn't affect people already retired.

However, your existing state pension will continue to be fully protected against inflation.

Working after pension age.

People who carry on working after pension age will no longer be liable for contributions after 6 April, although their employers will.

If you're self-employed.

You will not contribute to the new additional pension and will not receive it. But your rights to the basic pension remain and you will pay lower contributions than you did before.

To find out more.

For full details of the new pension scheme fill in this coupon, or ask your local Social Security office for a copy of leaflet NP34. The leaflet also covers other changes, some of which affect people with more than one job.

Please send me leaflet NP34 (write the number of copies you need in the box)

Mr/Mrs/Miss

Full address

Cut coupon out and post to: DHSS Leaflets Units, P.O. Box 21, Stanmore, Middlesex HA7 1AY

NEW PENSIONS: A MORE SECURE FUTURE

NP/B/FT/1

HOME NEWS

British Leyland plan to build on success

BY TERRY DODSWORTH, MOTOR INDUSTRY CORRESPONDENT

BRITISH LEYLAND plans to give greater priority to the development of its successful products, such as its four-wheel drive vehicles and its Rover and Jaguar saloon car ranges, in the new five-year plan, being considered by the National Enterprise Board.

The plan also calls for a re-phasing of investment in the Leyland Vehicles (truck and bus) division to give it more

Edwardes will still run car division

MR. MICHAEL EDWARDES, chairman of British Leyland, will continue to run the group's cars division for the time being. His decision, announced yesterday, illustrates the difficulties Leyland is facing in attracting new high-calibre management.

Mr. Edwardes has stressed repeatedly that he does not want to get immersed in the day-to-day activities of the individual product groups.

But so far he has failed to find anyone to take the central job as executive vice-chairman with responsibility for BL Cars, despite approaches to senior figures in the industry, such as Mr. Bob Lutz, president of Ford of Europe, and Mr. Bob Price, chairman of Vauxhall.

In a statement yesterday, BL Cars said that Mr. Edwardes

would continue for the time being as chairman of the cars division.

The other members of the Board will be: Mr. Colin Daniel, director of finance and systems; Mr. John Hirsch, director, cars marketing; Mr. Spen King, director, engineering; Mr. Ray Horrocks, managing director, Austin Morris; Mr. Charles Maple, director, quality; Mr. Bill McLean, director, employee relations; Mr. Pratt Thompson, managing director, Jaguar Rover Triumph.

A managing director for the newly-created BL Components has to be announced. Mr. Lowry, corporate director of personnel and administration, and Mr. Gerry Wright, corporate director of design, will serve on the Board as non-executive directors.

Sales of used vehicles rise 28%

TURNOVER IN the U.K. motor trades rose by 17 per cent. in the fourth quarter of last year compared with the same period in 1976.

The largest component in the

rise was used vehicle sales, which went up by 28 per cent.

New vehicle sales rose by 22 per cent., and other sales and receipts, including petrol, oil and tyres, rose by 12 per cent.

Last year as a whole, turnover

in the motor trades was 22 per cent. higher.

Rises in sales of new and used vehicles rose by 26 and 24 per cent. respectively, while other sales and receipts went up by 18 per cent.

Illness forces Fraud Squad chief to quit

BY MARGARET REID

COMMANDER Thomas Edwards, head of London's Metropolitan and City Police Fraud Squad for the past two years, is retiring early on health grounds.

Commander Edwards, aged 49, has presided over a wide range of inquiries, including complex ones in the international financial field. He had a series of major operations four years ago. He is now on three months leave before retiring on pension in May.

The holder of the Queen's Police Medal and eight

commendations, Commander Edwards is a forceful and independent-minded personality. He has served in the Flying Squad and spent a number of years in the Fraud Squad in the 1960s, when one of his most notable cases was the investigation into the Rolls Royce affair. From 1972 he served for some three years in the A.10 department set up to investigate complaints against police officers.

Scotland Yard said yesterday that no successor would be appointed until Commander Edwards had retired.

Deadline for investment grant applications

BY LYNTON McLAIN, INDUSTRIAL STAFF

THE LAST government Order specifying dates by which applications for investment grants must be made came into operation yesterday.

The grants were established in 1968 to give industry over the whole country grants of 20 per cent. for new capital expenditure. In the developing regions it was 40 per cent., but this scheme has been phased out gradually since October 1970, in favour of other forms of aid, including regional development grants.

Under the Investment and Buildings Grants Act 1971, com-

panies could claim the grants only for capital expenditure incurred in contracts made before October 27, 1970.

Previous termination orders have extended the deadline for applications for investment grants and last night the Department of Industry said the final termination date specified in the latest order should be sufficiently far ahead to cover all outstanding expenditure. But if expenditure is incurred after March 31, 1987, as a result of a contract made before October 27, 1970, further extension orders will be made.

DATES AND PERIODS SPECIFIED IN THE ORDER

Expenditure incurred	Date before which application must be made
April 1-September 30, 1977	January 1, 1979
October 1, 1977-March 31, 1978	April 1, 1979
April 1-September 30, 1978	July 1, 1979
October 1, 1978-March 31, 1979	October 1, 1979
April 1, 1979-March 31, 1983	Before the last day of a six months' period beginning with the day on which the expenditure is incurred.

£4m. nursery school aid

LOCAL authorities in England have been given their allocations from the £4m. available for nursery education building in 1978-79.

The Department of Education and Science has given priority to authorities wishing to spend more in areas of social and educa-

tional disadvantage and to projects for handicapped children.

Bids for allocations in other areas have been met to the extent of 67 per cent. of the amounts required. The allocations are not grants but are limits within which building projects may start in 1978-79.

Whitehall split on Typhoo closure

BY ARTHUR SMITH, MIDLANDS CORRESPONDENT

THE decision announced yesterday by Cadbury-Schweppes to close its Typhoo tea packing factory in Birmingham, with the loss of 550 jobs, has exposed a clash of interest between Government departments.

The Department of Industry is believed to have approved the transfer of work to the company's plant at Moreton, near Birkenhead, a specially-assisted area where unemployment is high.

Other Ministers have expressed concern at the impact of closure of the Bordesley Street plant on Birmingham, which is anxious to bring employment to its declining inner city area.

The Department of the Environment announced last night that Mr. Reg Freeman, Minister for Housing and Construction, would meet Sir Adrian Cadbury, the company chairman, on Thursday to explore the future use of the factory and alternative employment prospects for the workers.

Mr. Freeman is chairman of the Birmingham City Council's Committee, responsible for generating new employment under the Government's policy for regenerating inner city areas.

Shop stewards reacted angrily last night to the company's announcement. "We are fighting the decision," said Mr. Tom Burke, the Transport and General Workers Union senior steward.

A mass meeting will be held tomorrow to consider appropriate action, he said.

Cadbury-Schweppes is to con-

centrate tea packing at its other Typhoo factory at Moreton, on the Wirral. The North-west plant has suffered from the downturn in the economy and is in an area of high unemployment.

The company, which wants to instal modern, high-speed machinery, points out that such investment must be concentrated in one place. The Birmingham factory was built in the 19th century.

Cadbury-Schweppes will benefit from moving to a Government-assisted area where it can occupy empty buildings and collect £220,000 in State aid towards the £1m. cost of six new packing machines and ancillary equipment. The freehold Birmingham factory can be put on the market to collect about £480.

The company denied yesterday that regional assistance was the reason for the move. "Special redundancy payments" would be offered to the Birmingham work force, plus the opportunity of alternative employment either in the Midlands or at Moreton.

The closure of the Birmingham operation would be phased over a 12-month period and employees with three years' service earning £50 a week could expect to collect about £480.

Mr. Burke said the redundancy terms were "very poor for a company of Cadbury-Schweppes' size and profitability." The company was unable last night to say how many additional jobs would be created at the Moreton factory.

Esso spends £3.5m. at Fawley plant

BY KEVIN DONE, CHEMICALS CORRESPONDENT

ESSO CHEMICAL is to expand its higher olefins plant at Fawley, near Southampton, at a cost of about £3.5m.

The move, which will increase production capacity at the site by a third, could lead to Esso building its first alcohol plant in Europe in the early 1980s.

The Fawley expansion, due to be completed in mid-1979, will substantially increase production of heptenes, octenes and nonenes.

Heptene capacity, which will be increased by 50 per cent., is currently set at 50,000 tonnes a year. The higher olefins are used as plastics and oil industry additives and as detergent raw materials.

After conversion to the intermediate alcohol stage, much of the additional octene and nonene

production will be routed to a new phthalate plasticiser plant, which is being built by Essochem Benelux in Rotterdam.

The plasticisers will be for use in the production of flexible PVC (polyvinyl chloride).

Esso has no plants in Europe for the conversion of higher olefins to the intermediate alcohol stage, with this part of the manufacturing chain being contracted to other chemical producers.

However, Esso Chemical said yesterday that preliminary design work was being undertaken for an alcohol project, with tentative plans for a unit to be built in the early 1980s. No Board approval has yet been sought for the project.

The major contract for the Fawley expansion has been awarded to Matthew Hall.

Economist predicts rise in GDP will be modest

BY DAVID FREUD

A GLOOMY assessment of the impact of North Sea oil on the U.K. economy has been made by Dr. Paul Neild, chief economist of stockbrokers Phillips and Drew.

He estimates that gross domestic product will rise by at best 3.25 per cent. a year in 1978-1981. This would require Government fiscal policies that would eliminate all the potential current account surplus and require a rolling-over of overseas debt due for repayment in the period.

If the Government followed more cautious policies, the growth in output would hardly exceed 2.5 per cent. a year, the average rate over the past 10 years.

In his paper, which attempts to estimate the effect of different policy options open to the Government in dealing with North Sea oil revenues, Dr. Neild states that the high marginal propensity to import is the major factor affecting expansion prospects.

"We estimate that the marginal propensity to import is now about 40 per cent. and rising. When combined with the loss of competitiveness due to a higher real exchange rate against 5 per cent. per annum inflation differential, the massive leakage into imports produces only a small increment to GDP growth in return for a relatively large erosion of the potential current account surplus."

Assuming that the historic inflation differential exists but that the exchange rate falls by 2.5 per cent. because of the North Sea resources, passive fiscal policies would produce the historic growth rate of 2.5 per cent. a year over the three years.

The current account surplus would be £2.5bn. a year.

Reflation providing enough current account surplus to repay overseas debt would bring growth up to 2.75 per cent. a year and the surplus down to £1.75bn.

Dr. Neild points out: "It can be seen that an increment to GDP growth of only 0.25 per cent. per annum is associated with a cut in the current account surplus of £0.75bn. per annum."

A fiscal policy erasing all the surplus and implying a roll-over of overseas debt repayments would produce growth of 3.25 per cent. This would be barely sufficient to reduce the registered unemployed from the present 1.5m. to 1m. by 1981.

Extending the time horizon to 1985, Dr. Neild produces an even less optimistic picture. Over the 1978-85 period as a whole annual growth would average only 2.75 per cent., under the fiscal policies that would erase all the surplus.

If the exchange rate were held stable instead of declining by 2.5 per cent. a year, growth would fall to 1.75 per cent. with the current account in bare balance.

If the pound declined in line with differential inflation, reflation to exhaust the whole current account surplus could give a 3.5 per cent. a year GDP growth rate over the period, 1 per cent. higher than the U.K. has been used to.



Mr. Denis Howell (right) with Mr. John Alderson, chief constable of Devon and Cornwall, on a visit to the snow-hit West.

State aid to save stranded animals

BY CHRISTOPHER DUNN

THE GOVERNMENT moved quickly yesterday to honour its pledge of full support to snow-bound areas in the West Country by offering to pay part of the cost of feeding stranded livestock.

Mr. John Silkin, Minister of Agriculture, said the Government would pay an appropriate part of the cost, meaning it would foot the bill for helicopters, while farmers paid the fodder.

Mr. Denis Howell, the Environment Minister who will deal with the problems, called on counties hardest hit in the worst blizzards seen in the West Country for 30 years to appoint emergency officers.

Many rail services in the Southern and Western regions were resumed, but road travellers faced new hazards from fog and freezing rain.

Farmers in desperate straits trying to feed animals on snow-bound Exmoor and Dartmoor had claimed yesterday that relief by helicopters was being held up because "no one knew who was going to pay the £200-an-hour fee."

Livestock losses had been considerable, the National Farmers' Union said. At least 75 farms in Devon and Somerset needed feedstuffs immediately.

Milk collections have also been severely disrupted, especially in Devon and Somerset, with almost no collections since the week-end.

The Milk Marketing Board said yesterday that thousands of gallons would be lost, because lorries could not reach the farms. Shortage of storage space will force farmers to tip the milk away.

People at risk would be top of the list for help. Mr. Howell said yesterday in his fact-finding trip to the South West. Government resources would concentrate next on helping the old and the sick, and then on people isolated by the blizzards.

Getting food, fuel, electricity and water to people would be a

Helicopter

A year full service to the West of England ran all day, with delays in arrivals at Paderborn from the West Country gradually diminishing to less than two hours.

The RAC, which had a helicopter standing by at Plymouth manned by Marines to pick up stranded motorists, reported little improvement in roads, with Dorset "completely paralysed", Somerset "virtually impassable", and Devon "in a state of chaos".

Staff at the Westland helicopter factory in Yeovil, operating at about 20 per cent. capacity, left work at 4 p.m. to avoid problems getting home.

Notice of Redemption

Utah International Finance Corp.

8% Guaranteed Sinking Fund Debentures Due March 15, 1987

NOTICE IS HEREBY GIVEN that, pursuant to the provisions of the Indenture dated as of March 15, 1972 under which the above described Debentures were issued; Citibank, N.A. (formerly First National City Bank), as Trustee, has drawn for redemption on March 15, 1978 (the redemption date), through the operation of the Sinking Fund provided for in said Indenture, \$3,000,000 principal amount of Debentures of the said issue, bearing the following distinctive numbers:

COUPON DEBENTURES OF \$1,000 PRINCIPAL AMOUNT OUTSTANDING									
M20 1080	2339	2726	4720	5365	7152	8545	8686	11196	12359
241 1223	2457	2728	4721	5366	7153	8546	8687	11197	12360
242 1224	2458	2729	4722	5367	7154	8547	8688	11198	12361
243 1225	2459	2730	4723	5368	7155	8548	8689	11199	12362
244 1226	2460	2731	4724	5369	7156	8549	8690	11200	12363
245 1227	2461	2732	4725	5370	7157	8550	8691	11201	12364
246 1228	2462	2733	4726	5371	7158	8551	8692	11202	12365
247 1229	2463	2734	4727	5372	7159	8552	8693	11203	12366
248 1230	2464	2735	4728	5373	7160	8553	8694	11204	12367
249 1231	2465	2736	4729	5374	7161	8554	8695	11205	12368
250 1232	2466	2737	4730	5375	7162	8555	8696	11206	12369
251 1233	2467	2738	4731	5376	7163	8556	8697	11207	12370
252 1234	2468	2739	4732	5377	7164	8557	8698	11208	12371
253 1235	2469	2740	4733	5378	7165	8558	8699	11209	12372
254 1236	2470	2741	4734	5379	7166	8559	8700	11210	12373
255 1237	2471	2742	4735	5380	7167	8560	8701	11211	12374
256 1238	2472	2743	4736	5381	7168	8561	8702	11212	12375
257 1239	2473	2744	4737	5382	7169	8562	8703	11213	12376
258 1240	2474	2745	4738	5383	7170	8563	8704	11214	12377
259 1241	2475	2746	4739	5384	7171	8564	8705	11215	12378
260 1242	2476	2747	4740	5385	7172	8565	8706	11216	12379
261 1243	2477	2748	4741	5386	7173	8566	8707	11217	12380
262 1244	2478	2749	4742	5387	7174	8567	8708	11218	12381
263 1245	2479	2750	4743	5388	7175	8568	8709	11219	12382
264 1246	2480	2751	4744	5389	7176	8569	8710	11220	12383
265 1247	2481	2752	4745	5390	7177	8570	8711	11221	12384
266 1248	2482	2753	4746	5391	7178	8571	8712	11222	12385
267 1249	2483	2754	4747	5392	7179	8572	8713	11223	12386
268 1250	2484	2755	4748	5393	7180	8573	8714	11224	12387
269 1251	2485	2756	4749	5394	7181	8574	8715	11225	12388
270 1252	2486	2757	4750	5395	7182	8575	8716	11226	12389
271 1253	2487	2758	4751	5396	7183	8576	8717	11227	12390
272 1254	2488	2759	4752	5397	7184	8577	8718	11228	12391
273 1255	2489	2760	4753	5398	7185	8578	8719	11229	12392
274 1256	2490	2761	4754	5399	7186	8579	8720	11230	12393
275 1257	2491	2762	4755	5400	7187	8580	8721	11231	12394
276 1258	2492	2763	4756	5401	7188	8581	8722	11232	12395
277 1259	2493	2764	4757	5402	7189	8582	8723	11233	12396
278 1260	2494	2765	4758	5403	7190	8583	8724	11234	12397
279 1261	2495	2766	4759	5404	7191	8584	8725	11235	12398
280 1262	2496	2767	4760	5405	7192	8585	8726	11236	12399
281 1263	2497	2768	4761	5406	7193	8586	8727	11237	12400
282 1264	2498	2769	4762	5407	7194	8587	8728	11238	12401
283 1265	2499	2770	4763	5408	7195	8588	8729	11239	12402
284 1266	2500	2771	4764	5409	7196	8589	8730	11240	12403
285 1267	2501	2772	4765	5410	7197	8590	8731	11241	12404
286 1268	2502	2773	4766	5411	7198	8591	8732	11242	12405
287 1269	2503	2774	4767	5412	7199	8592	8733	11243	12406
288 1270	2504	2775	4768	5413	7200	8593	8734	11244	12407
289 1271	2505	2776	4769	5414	7201	8594	8735	11245	12408
290 1272	2506	2777	4770	5415	7202	8595	8736	11246	12409
291 1273	2507	2778	4771	5416	7203	8596	8737	11247	12410
292 1274	2508	2779	4772	5417	7204	8597	8738	11248	12411
293 1275	2509	2780	4773	5418	7205	8598	8739	11249	12412
294 1276	2510	2781	4774	5419	7206	8599	8740	11250	12413
295 1277	2511	2782	4775	5420	7207	8600	8741	11251	12414
296 1278	2512	2783	4776	5421	7208	8601	8742	11252	12415
297 1279	2513	2784	4777	5422	7209	8602	8743	11253	12416
298 1280	2514	2785	4778	5423	7210	8603	8744	11254	12417
299 1281	2515	2786	4779	5424	7211	8604	8745	11255	12418
300 1282	2516	2787	4780	5425	7212	8605	8746	11256	12419
301 1283	2517	2788	4781	5426	7213	8606	8747	11257	12420
302 1284	2518	2789	4782	5427	7214	8607	8748	11258	12421
303 1285	2519	2790	4783	5428	7215	8608	8749	11259	12422
304 1286	2520	2791	4784	5429	7216	8609	8750	11260	12423
305 1287	2521	2792	4785	5430	7217	8610	8751	11261	12424
306 1288	2522	2793	4786	5431	7218	8611	8752	11262	12425
307 1289	2523	2794	4787	5432	7219	8612	8753	11263	12426
308 1290	2524	2795	4788	5433	7220	8613	8754	11264	12427
309 1291	2525	2796	4789	5434	7221	8614	8755	11265	12428
310 1292	2526	2797	4790	5435	7222	8615	8756	11266	12429
311 1293	2527	2798	4791	5436	7223	8616	8757	11267	12430
312 1294	2528	2799	4792	5437	7224	8617	8758	11268	12431
313 1295	2529	2800	4793	5438	7225	8618	8759	11269	12432
314 1296	2530	2801	4794	5439	7226	8619	8760	11270	12433
315 1297	2531	2802	4795	5440	7227	8620	8761	11271	12434
316 1298	2532	2803	4796	5441	7228	8621	8762	11272	12435
317 1299	2533	2804	4797	5442	7229	8622	8763	11273	12436
318 1300	2534	2805	4798	5443	7230	8623	8764	11274	12437
319 1301	2535	2806	4799	5444	7231	8624	8765	11275	12438
320 1302	2536	2807	4800	5445	7232	8625	8766	11276	12439
321 1303	2537	2808	4801	5446	7233	8626	8767	11277	12440
322 1304	2538	2809	4802	5447	7234	8627	8768	11278	12441
323 1305	2539	2810	4803	5448	7235	8628	8769	11279	12442
324 1306	2540	2811	4804	5449	7236	8629	8770	11280	12443
325 1307	2541	2812	4805	5450	7237	8630	8771	11281	12444
326 1308	2542	2813	4806	5451	7238	8631	8772	11282	12445
327 1309	2543	2814	4807	5452	7239	8632	8773	11283	12446
328 1310	2544	2815	4808	5453	7240	8633	8774	11284	12447
329 1311	2545	2816	4809	5454	7241	8634	8775	11285	12448
330 1312	2546	2817	4810	5455	7242	8635	8776	11286	12449
331 1313	2547	2818	4811	5456	7243	8636	8777	11287	12450
332 1314	2548	2819	4812	5457	7244	8637	8778	11288	12451
333 1315	2549	2820	4813	5458	7245	8638	8779	11289	12452
334 1316	2550	2821	4814	5459	7246	8639	8780	11290	12453
335 1317	2551	2822	4815	5460	7247	8640	8781	11291	12454
336 1318	2552	2823	4816	5461	7248	8641	8782	11292	12455
337 1319	2553	2824	4817	5462	7249	8642	8783	11293	12456
338 1320	2554	2825	4818	5463	7250	8643	8784	11294	12457
339 1321	2555	2826	4819	5464	7251	8644	8785	11295	12458
340 1322	2556	2827	4820	5465	7252	8645	8786	11296	12459
341 1323	2557	2828	4821	5466	7253	8646	8787	11297	12460
342 1324	2558	2829	4822	5467	7254	8647	8788	11298	12461
343 1325	2559	2830	4823	5468	7255	8648	8789	11299	12462
344 1326	2560	2831	4824	5469	7256	8649	8790	11300	12463
345 1327	2561	2832	4825	5470	7257	8650	8791	11301	12464
346 1328	2562	2833	4826	5471	7258	8651	8792	11302	12465
347 1329	2563	2834	4827	5472	7259	8652	8793	11303	12466
348 1330	2564	2835	4828	5473	7260	8653	8794	11304	12467
349 1331	2565	2836	4829	5474	7261	8654	8795	11305	12468
350 1332	2566	2837	4830	5475	7262	8655	8796	11306	12469
351 1333	2567	2838	4831	5476	7263	8656	8797	11307	12470
352 1334	2568	2839	4832	5477	7264	8657	8798	11308	12471
353 1335	2569	2840	4833	5478	7265	8658	8799	11309	12472
354 1336	2570	2841	4834	5479	7266	8659	8800	11310	12473
355 1337	2571	2842	4835	5480	7267	8660	8801	11311	12474
356 1338	2572	2843	4836	5481	7268	8661	8802	11312	12475
357 1339	2573	2844	4837	5482	7269	8662	8803	11313	12476
358 1340	2574	2845	4838	5483	7270	8663	8804	11314	12477
359 1341	2575	2846	4839	5484	7271	8664	8805	11315	12478
360 1342	2576	2847	4840	5485	7272	8665	8806	11316	12479
361 1343	2577	2848	4841	5486	7273	8666	8807	11317	12480
362 1344	2578	2849	4842	5487	7274	8667	8808	11318	12481
363 1345	2579	2850	4843	548					



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HOME NEWS

Channel hovercraft will not be ready

BY IAN HARGREAVES, SHIPPING CORRESPONDENT

FRANCE'S NEW £10m. N500 hovercraft, the biggest in the world, has run into mechanical problems and will not be ready for cross-Channel services next month as planned.

The hovercraft Ingenieur Jean Bertin is at the moment sitting on shore at Boulogne instead of being put through sea trials off Dover, where it is due to join the railway-owned Seaspeed fleet on the Dover-Boulogne/Calais run.

Although British Rail Seaspeed officials hope the N500 will be ready for service at the end of April, in time for the summer holiday rush, they are disappointed that they have been let down again by the French craft.

The first N500 should have entered service last summer, but it was burned out on its pad when a welder's torch set fire to the hovercraft's skirt. This left Seaspeed with only one standard 250-seater SRN4 for the whole summer period because its second craft, the Princess Anne, was being

lengthened by the British Hovercraft Corporation in Cowes. Seaspeed, the marketing organisation jointly funded by British Rail and Societe Nationale des Chemins de Fer, has been advising passengers that their bookings on the N500 have been transferred to the SRN4 or to conventional Sealink ferries.

It also has been forced to cut back on advertising campaigns at a time when cross-Channel operators are vying for what is expected to be record traffic this summer.

Mr. John Lefaux, managing director of Seaspeed, confirmed that the main cause of the delay was trouble with the N500's skirt, but he said the manufacturer had now solved an earlier problem with the hovercraft's propeller.

He said: "I will not deny that we are a bit feeling a bit sorry for ourselves here and that the French are having to cope with a dent to their annual output. The N500 is a project of

national significance in France and its manufacturer—the Societe d'Etudes et de Developpement des Aeroglisseurs Marins, Terrestres et Amphibies (SEDAM)—has been anxious to prove the vessel's capabilities following last year's disaster and a steady flow of criticism from within the industry about the craft's handling characteristics.

The French Government has contributed half the development and production costs of the two N500s.

According to Mr. Lefaux, the lengthening of Seaspeed's second craft is proceeding smoothly, although slightly behind schedule. But this craft, with a capacity similar to that of the N500—more than 400 passengers and 60 cars—is not due to enter service until July.

Seaspeed had been counting on the N500 and the stretched craft together to increase passenger levels from last year's loss-making 100,000 to more than 1.5m. in 1978.

New plan to fight record rigging

BY ANTONY THORNCROFT

STUNG BY a new bout of Press criticism of "chart rigging" by record companies, the British Phonographic Industry, the record trade's official watchdog, is to hold an urgent meeting this week to investigate the charges.

Every few years attempts to rig the record charts come to light and this case was serious enough for the BPI to consider calling in the police.

The attraction to record companies in getting an entry into the "Top Fifty" is that the BPI then tends to give the record air time. A self-perpetuating cycle gets underway—air play leading to more sales which leads to more air play.

Although the importance of the chart is recognised by the BPI, and the Music Market Research Bureau, a reputable research firm, which has been undertaking the task since 1963, it is still possible for records to buy their way into the charts.

For the research firm only covers a panel of 300 out of the 5,000 record dealers in the U.K. and two of the main distributors of records, W. H. Smith and Boots, refuse to let their researchers know their sales figures.

Since it is possible to make the lower reaches of the charts by selling just a few hundred records during a slack time of the year, knowledge of which shops are providing information is very useful to record companies.

But there is a check—the research bureau phones 50 shops which are not giving sales figures just to make sure that the records in the charts conform with their experience of current sales.

Optimism for offshore supply industry

By Ray Dafter, Energy Correspondent

COMPANIES supplying goods and services to the North Sea oil and gas industries are in a good position to win a major slice of the world offshore business, now valued at about £4bn. a year, according to Sir Jack Rampton, Permanent Under-Secretary of State for the Department of Energy.

Sir Jack said yesterday that the North Sea already accounted for a quarter of the worldwide offshore business.

"If we can competitively take more than 60 per cent. of our home market, which is what we are now doing, then there is a good reason why the U.K. offshore industry should expand in a comprehensive way into offshore markets overseas."

In the early 1980s the world offshore market could be worth about £8bn, he said in London before leaving for the Far East. During his visit Sir Jack will be attending the second Offshore South East Asia Conference and Exhibition in Singapore.

A consortium of 40 companies will be spending \$415m. a year in search of gas and oil in the northwest shelf of Western Australia. Mr. Leslie Hyland, president of Australia's Continental Oil and Gas, said in Singapore. He said this would rise to \$425m. annually by the 1980s.

Executives back profit sharing

By James McDonald

SENIOR company executives in Britain show considerable support for profit sharing.

A survey carried out earlier this month by Market and Opinion Research International, says that about three-quarters of those interviewed were in favour.

The inquiry followed publication earlier this month of the Government's consultative document on profit-sharing, issued by the Inland Revenue.

The survey was conducted among 100 companies, chosen randomly from the "Kompass" list and from a sample of 75 respondents from The Times list of top companies.

Those in favour mentioned greater incentive to employees as reasons for their support. There was also widespread support for the idea that the Government should provide incentives to approved profit-sharing schemes.

Senior Corporate Executives' Attitudes Towards Profit Sharing in Industry, Market and Opinion Research International, 25, Queen Anne's Gate, London, S.W.1, £20.

"Disruptions have meant lost sales, low profit and thus lost cash. As a result Rockware used up £6m. of its cash reserves. Many of these lost sales could be lost for good."

Mr. David Bailey, Rockware's managing director, pointed out that the glass was made stayed in our warehouses, he said in an editorial in a new group newspaper.

LABOUR NEWS



Mr. Jones and Mr. Callaghan, with their wives Evelyn and Audrey, enjoying Mike Yarwood's impressions at the Festival Hall.

Labour's farewell to Jack Jones

BY CHRISTIAN TYLER, LABOUR EDITOR

THE LABOUR movement in Britain yesterday said goodbye to Mr. Jack Jones after his nine years' leadership of the country's biggest union, the Transport and General Workers.

At a celebration in the Festival Hall, London, to mark Mr. Jones' retirement next month, the Prime Minister spoke of the vision which led Jack Jones to forge the social contract between the unions and the Labour Party, then in Opposition.

Mr. Callaghan said the partnership had carried Labour to electoral victory in 1974 and sustained it "almost miraculously" through four years of minority government. He said it was an achievement unique in our Parliamentary history.

On behalf of the rest of the TUC, Mr. Len Murray, general secretary, pinpointed Mr. Jones' best-known contribution to trade unionism: the development of power to the shop floor and its extension into company decision-making. "The key to progress and a democratic place of work at that," he said.

His final message was cast wider, if only for the sake of the children, he said, there must be international labour solidarity. With or without the 3,000 people, most of them rank and file representatives of the union, gave Mr. Jones a standing ovation.

The event was planned with brass band, light orchestra and cabaret—also to welcome Mr. Moss Evans, Mr. Jones' successor, and to celebrate the union's climb to the 2m. membership mark last autumn. But the day really belonged to Mr. Jones—and his wife Evelyn.

There was, it must be admitted, a tussle for the limelight earlier when Mr. Callaghan entered the hall just as Mike Yarwood was finishing one of the best speeches Mr. Callaghan has made. The Prime Minister, we were told, had been anxious not to miss himself, and saw most of it from the wings.

In his own speech, Mr. Jones returned to fundamentals. "Organise," he said. "That's still a magic word, because with organisation you can move mountains."

It has been a wonderful experience for me to serve within this great army of labour, and now I am about to retire to the ranks. But I will still be in the army of labour, even if it's the Dad's Army section."

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The report says resources must be directed to "raising" manufacturing and that there is, therefore, no question of abandoning the Industrial Strategy.

It adds that the Strategy needs to be redirected downwards to company level. Inducements such as tax concessions have failed so the report suggests that the original concept of planning agreements, involving the Government, management and unions, and covering planning, investment and growth, should be revived for major companies.

This alone will have limited effect in creating jobs because of technological changes, so a full manpower policy is needed.

The union says measures should include automatic extensions of the Temporary Employment Subsidy in the case of mass redundancies, a Job Expansion Premium and more resources for the National Enterprise Board and the Scottish and Welsh Development Agencies.

Use of North Sea money for tax cuts and foreign loan repayments should remain low priorities, the union adds.

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Union branch demands British Steel inquiry

BY JOHN LLOYD AND ROBIN REEVES

A DEMAND for a public inquiry into the management of the British Steel Corporation's Ebbw Vale plant has come from the local official of the Amalgamated Union of Engineering Workers, Mr. Albert John.

The South Wales district of the AUEW has backed the four-day "dirty jobs" strike by 750 maintenance engineers which has halted production, and has called on the union's executive to make the strike official.

Mr. John claims that the management has deliberately provoked the strike by asking a number of workers to carry out maintenance on a piece of machinery when it was known that it was not their job to do so. When they refused to do the work, they were told they would not be paid.

Production at Ebbw Vale has been halted since last Wednesday.

The plant normally produces 10,000 tonnes a week and is responsible for one third of the U.K. tinplate production. A new electrolytic tinning line, which will produce chrome steel and double reduced tin, is being introduced at a cost of £20m.

Alan Pike, Labour Correspondent, writes: Union leaders representing 27,500 steel industry craftsmen again failed to reach agreement on pay at further talks with BSC officials yesterday.

British Steel has told its own workers and craftsmen that it is prepared to offer pay increases of 9 per cent. in return for union co-operation in economy measures. It was stressed to the craftsmen, at yesterday's talks, that if they were not prepared to discuss these conditions, the Corporation would revert to its original pay offer of 5 per cent.

The Advisory Conciliation and Arbitration Service (ACAS) has recommended that the union representing 26 packers should be recognised by the company.

Autogem (U.K.) of Morley, Leeds, applied successfully to a wage court hearing, banned six High Court judges for an order to stop the TGWU taking action to force the company to accept the Central Arbitration Committee's recommendation that the ACAS recommendation is invalid.

Smooth return to work at Halewood plant

BY PHILIP BASSETT, LABOUR STAFF

PRODUCTION at Ford's £110m. Halewood car plant on Merseyside started yesterday after a six-week-long strike by 1,000 pressroom workers. Ten thousand men laid off at Halewood and Ford's Southampton plant were recalled.

Halewood management was so well-prepared for the return to work that an hour's overtime was possible at the end of the day shift.

Some Escorts left on the production line during the strike, leaving the line with minutes of work starting.

Shop stewards at British Leyland's car plant at Speke, Merseyside, which is now in the 17th week of a strike by 1,800 hauliers, spent a day talking with plant management over the introduction of new lift speeds.

although there are fears the prolonged action could affect production.

The companies include the British Leyland Group, which is already on strike, and BNO, whose Telford plant is expected to start production soon.

RADIO OPERATORS on British North Sea oil installations started a work to rule yesterday.

It is likely to disrupt vital communications between about a dozen oil rigs.

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West air link opens early

REGULAR Air Westward flights from the West Country to France, Scotland and the Netherlands will begin on May 1—a month earlier than expected.

Mr. Peter Cadbury, chairman, announced yesterday that the airline subsidiary of Westward Television will start daily services from Exeter to Paris and Glasgow and twice daily flights to Amsterdam via 12-seater Cessna Tiltan aircraft. The first of three Tiltans has already been delivered.

"These aircraft will give more flexibility during the initial period when we are learning which routes are most in demand," said Mr. Cadbury, who revealed that the company had abandoned plans to buy the 18-seater Embraer Bandeirante turbo-prop aircraft.

"The decision follows frustrated efforts on our part to mount scheduled services to the Banderante for the 1978 summer season. We just ran out of time."

Air Westward was to have been the first British airline to operate with the Brazilian-built aircraft. But Mr. Cadbury points out: "The Tiltan has proven passenger appeal and is ideal for exploring the market. We will monitor developments in order to switch to bigger aircraft as soon as they are justified. But for the moment, we will concentrate on pioneering a new airline rather than a new aircraft."

Final details of Air Westward schedules and fares are now being worked out and will be announced next month. An application to link Exeter and Gairwick with regular hour-long flights is due to be heard by the Civil Aviation Authority in the next few weeks.

Airline denies plan to drop Concorde

BY MICHAEL DONNE, AEROSPACE CORRESPONDENT

BRITISH AIRWAYS denied yesterday that it was thinking of dropping its Concorde operations, even though they are still losing money.

Suggestions to that effect were made following unconfirmed reports from Paris that Air France was increasingly concerned about losses, and might suspend Concorde operations, with its four aircraft.

British Airways, which has five Concorde in service—costing more than £150m. including equipment such as a flight simulator—made it clear that it was fully committed to Concorde, and hoped to break even soon on some of its routes, such as that to New York.

Air France also categorically denied reports that it had any intention of stopping its Concorde flights, which at present operate from Roissy-Charles de Gaulle Airport to New York, Washington, Rio de Janeiro and Caracas.

Mr. Cyril McGhee, the airline's London spokesman, said Air France had received no instructions from the French Government relating to future Concorde operations.

RAFT

*Including the French Air

100

100

In Great Britain: Siemens Ltd.

PARLIAMENT AND POLITICS

Ulster urged to stay calm after bombing

BY IVOR OWEN, PARLIAMENTARY STAFF

A "KEEP CALM" appeal went out to Northern Ireland from both sides of the Commons yesterday when MPs condemned the Provisional IRA for the horrific nature of the County Down restaurant bombing, which killed 12 people and injured a further 23.

Mr. Roy Mason, Ulster Secretary, promised that there would be no relaxation in the intensive efforts being made to track down those responsible for "this terrible crime."

He ruled out the re-introduction of capital punishment for terrorist offences, repeated assurances that there is no question of the Government agreeing to an amnesty for convicted terrorists, and warned that a "violent reaction" would be playing into the hands of the Provisionals.

"I realise the deep emotions which have been aroused, but what is needed is restraint, plus the maximum support of the security forces for the whole community," Mr. Mason said.

After Mr. Airey Neave, shadow Ulster Secretary, had condemned the bombing from the Opposition front bench, the Rev. Ian Paisley (Dem. Unionist, Antrim N.) said the outrage had left Northern Ireland "numb." He called on the Protestant community to restrain themselves and not retaliate in any way "because that is exactly what the IRA and these diabolical murderers want."

Mr. Paisley expressed concern about a report that detectives working on the case, who had been responsible for bringing the "godfathers of violence" into custody were being put at risk by a whitewash operation which would result in those arrested being released in a few days' time.

He also complained that concern had been caused in Northern

Ireland by statements made by Dr. David Owen, Foreign Secretary, in which he described guerrillas operating in Rhodesia as "freedom fighters." There was a very strong opinion in the province that Mr. Mason needed to declare "a fight to the finish" with no let-up in the war against these "fendish murderers."

Welcoming Mr. Paisley's appeal for restraint, Mr. Mason said that the purpose of arresting the "so-called godfathers" and some senior people in the Provisional Sinn Féin had been to try to get leads and information as quickly as possible to root out those responsible for the restaurant bombing. "There will be no let-up, as far as I am concerned," the Secretary of State declared.

When Mr. Philip Goodhart (C., Beekenhampstead) urged that pressure should be maintained so that the godfathers were kept off the streets of Belfast and Londonderry, even if the security forces did not have enough firm evidence to get convictions, Mr. Mason insisted that evidence must be obtained before a charge was made.

It was essential that the policy of treating terrorists as criminals should be sustained in relation to the so-called godfathers, as well as others involved, he added.

Mr. Neave described the restaurant bombing as a cowardly crime and perhaps the worst of its kind in many years of futile murder and destruction by the IRA. He led demands for a further assurance that there would be no kind of amnesty for convicted terrorists.

Mr. Mason stressed that those charged with terrorist offences were processed through the courts of law and sentenced as criminals. "There will be no amnesty,"

He ruled out the reintroduction of capital punishment for terrorist offences when Mr. James Kilfedder (Unionist, Down N.) questioned the value of Government assurances that there would be no amnesty and argued: "A dead martyr is much to be preferred to a dead innocent person."

Mr. Mason recalled that the abolition of the death penalty had resulted from a free vote in the Commons. It would be unlikely to deter the callous fanatics responsible for the carnage in the restaurant.

Imprisonment and the knowledge that they were criminals with no prospect of an amnesty was, he believed, a greater deterrent than the death penalty which would give the terrorists the "glamour of martyrdom."

Mr. James Mulvennaux (UU, Antrim S.) said there was a widely held view in the security forces that they were being inhibited by political considerations.

Mr. Mason replied that there were no political restraints on the security forces. But members of the RUC and the Army must act within the law. "They are not above it or beyond it."

He emphasised that there was no question of "no go" areas for the Army in Northern Ireland. The Ulster Defence Regiment had operated in some parts of Belfast but, he conceded, not in others.

An attempt by Mr. Kilfedder to secure an emergency debate on the security situation was rejected by the Speaker, Mr. George Thomas.

Mr. Mason told MPs that it was still not possible to say what had caused the crash of the Army helicopter in which the commanding officer of the 2nd Battalion Royal Greenjackets died.

N. Ireland report will propose more MPs

By Richard Evans, Lobby Editor

INCREASED representation at Westminster for Northern Ireland, to be recommended today in a report from the Speaker's conference on electoral law, will give Ministers the opportunity to retain some political support from the United Ulster Unionists for the remainder of the Parliamentary session.

Mr. Callaghan, who will make a statement on the recommendations to the Commons, will promise only to consider the report.

But it would be highly unusual for a Government to reject its findings, which are believed to be that the number of Northern Ireland MPs at Westminster should rise from 12 to 17.

Although no firm pledge can be given because of the uncertainty of the Government's legislative programme, Ministers hope to introduce a Bill implementing the recommendations later in the session. This hope should be sufficiently attractive to Ulster MPs to ensure that they do not opt for an early general election.

There is no prospect of the recommendations taking effect before the next election, however, as there will have to be a Boundary Commission inquiry once the Bill is passed to draft boundaries for the 17 new constituencies.

Northern Ireland has been seriously under-represented at Westminster since the suspension of Stormont by the Heath administration in 1972. Previously, the low representation had been justified because of the shared administrative work-load with Stormont.

Rossi outlines Tory aim on help to home buyers

BY JOHN HUNT, PARLIAMENTARY CORRESPONDENT

A Tory Government hopes to introduce grants of between £1,000 and £1,500 to help first-time home-buyers. Mr. Hugh Rossi, Conservative housing spokesman, told the Commons last night.

He was speaking on the Second Reading of the Government Bill which provides an interest-free loan of £600 for first-time home-buyers, with a bonus of up to £110 for those who have for two years.

Opening the debate, Mr. Peter Shore, Environment Secretary, made it clear that the Government has no intention of allowing an explosion in house prices. His department was now watching the situation very carefully, he said.

The Bill came in for considerable criticism from Mr. Rossi, who argued that house prices would have soared out of reach by the time the two-year qualifying saving period was up.

He outlined the Government's promise that the Tories would introduce a better scheme of their own if they were returned to power at the next general election.

Mr. Rossi welcomed the Bill "as far as it goes." But he suspected the Government's motives in what could be an election year. However, he said, it represented the first tottering step in the Labour Party's conversion to the benefits of home ownership.

He noted with satisfaction that the Bill allowed the maximum bonus to be varied and the terms of payment to be altered by Ministerial direction. This was all that a Tory Government would need in order to introduce an improved scheme of its own based on the Bill.

"As soon as we are in office, we shall introduce a scheme whereby the first-time buyer will receive a tax-free bonus of £1 for every £2 saved," Mr. Rossi declared.

"If he saves £300, he will receive £150. There will be nothing for him to repay. It is also our dearest hope that we will be able to extend our scheme to qualify for outright grants of anything between £1,000 and £1,500."

"Real and substantial help towards home ownership is what young people want above all else. It is the kind of help we will give."

It is the cheapest way of supplying housing for them. We must make sure they realise their dreams. It can be done and it will be done."

Answering Labour queries about where the money would come from, Mr. Rossi said that the abolition of the Community Land Act, with the development and land tax would be a first step towards providing it.

He thought the Government Bill would do little harm but neither would it do much good. By the time the buyer received the tax-free loan, house prices would have risen and much of the gift would have left the gingerbread.

House prices had leapt 15 per cent. since Christmas in some areas. Houses now being built for £12,000 would probably cost between £17,000 within a year. Therefore, the Government would be better off taking steps to fend off a house-price explosion by tackling the real causes—land famine and planning delays.

In one instance recently, he said, a builder in the North of England found that houses he had planned to erect had risen by £2,000 each, due to planning delays. As a result, he had to abandon the project.

Mr. Shore, in his opening speech, gave a clear indication that Government housing policy has now switched strongly towards the owner-occupier. He said there would always be a need for a substantial well-managed rented sector, but the desire for home ownership was strong and growing. If this trend were to continue, four connected problems had to be tackled.

Tories stirring tension —Rees

By Rupert Cornwell, Lobby Staff

MR. MERLYN REES, Home Secretary, last night delivered a stinging attack on the Conservatives, accusing them of stirring up tension and trouble with their new insistence on immigration and tough law-and-order policies as election themes.

Mr. Rees, who was speaking to the Oxford University Labour Club, asked out what is likely to be the Government's position in the coming months on these two issues: that Labour "stands for order and fairness while the Tories are fomenting disorder and tension."

He accused Mrs. Margaret Thatcher of deliberately using emotive language and spurious statistics on immigration, which had incited bitterness and fear. "By moving towards the attitudes and policies of the National Front, she is alienating respectable opinion and exposing the Government to public opprobrium."

On law and order, particularly in inner cities, the Home Secretary said the Tories were being irresponsible and dangerous. He exaggerated the problems without offering practical solutions. "At this time of year, when the country is doing so well, this is an extraordinary statement."

Meanwhile, the Tory leadership closed ranks around Mrs. Thatcher, under fire not only from the Government but from Mr. Enoch Powell to Mr. Ian Gledhill, who said the party was liberalising.

Sir Keith Joseph, a key figure in Conservative policy making, urged voters to back Mrs. Thatcher's line. He argued that the response to her Government's interview had shown that most people believed mass immigration to be a mistake.

Mr. Teddy Taylor, shadow Scottish Secretary, used a speech to Kensington Young Conservatives to issue a blunt warning to her critics. "Come to feel that when we find the Labour party being sniped at from the so-called Left and Right, advocating immigration policies which are too strong and too weak respectively, there would appear to be grounds for concluding that she has struck the right balance," he said.

Disagreement over policy was normal in a healthy party, he said. Mr. Taylor: "This is a far cry from the activities of some within our party who appear to engage in repeated sniping, I am sure, which the party must not tolerate."

Mr. Gwynedd Roberts (Lab, Cannock) said that if the Welsh development measures had the same kind of progress as the Scottish Bill, there was little chance that devolution would be acceptable to the Welsh.

He added that 25,000, he already spent on the revision of the Coal Exchange and urged the Minister to consider alternative arrangements for it.

Mr. Morris said he did not share Mr. Roberts' pessimism. "The Welsh Government, I believe, is a success. It is a success because it has shown that the Labour Party has always been against 'specific' building of all sorts. Given the relative success of our energy policy and the conspicuous failure of devolution policy, what if it is high to consider the building being asked?"

Mr. Morris said MPs would have to wait and see the situation as it arose.

Contract rules apply to foreign companies

BY IVOR OWEN

FOREIGN OWNED companies, cover the eventualities that the U.K. and companies owned by foreign nationals and operating from other EEC countries will be required to sign the new contract-inflation contractual conditions introduced by the Government.

This was made clear by Mr. Joel Barnett, Chief Secretary to the Treasury, in written replies in the Commons yesterday.

Mr. Barnett stated: "Such a company will usually be required to sign a contract with the new

constituency, and admits frankly that its organisation in the area is practically non-existent."

Labour's agent will be Mr. Jimmy Allison, the national organiser for Scotland, who has his hands full at the moment preparing for the annual Scottish conference of the party to be held in mid-March. The campaign will not begin until afterwards.

Mr. Allison remembers with regret the Scottish by-election of November, 1973, when the SNP took an apparently solid Labour seat at Glasgow, Gorbairn.

"For many people there were making the arrogant assumption that we just couldn't lose. We are not going to make that mistake again. If we hold the seat, I would be exceedingly happy. If we lose, I would be disappointed, but not astounded."

Few people in the party are yet as realistic. The loss of Garscadden would be a heavy blow to Labour. On the other hand, the retention of the seat, by however small a margin, would be counted a tremendous victory.

The SNP has become a victim of its own election successes and is judged in Scotland by whether it wins or loses seats. Gaining a close second is not sufficient to maintain the party's reputation.

The result will be extremely important for both the Government's chances of winning the next general election and the future of the Scottish National Party. Both parties have staked their credibility on winning the by-election, which they see as a forerunner of the struggle for the two dozen Labour-held seats in western Scotland, where the SNP finished second last time.

Between the February and October general elections in 1974, the SNP campaign moved from third to second place in Garscadden, increasing the share of the vote from 21 per cent. to 31 per cent. at the expense of the Conservative. To take the seat, the SNP needs a 10 per cent swing from Labour. If it does succeed, it will have proved its ability to break the traditional Socialist hold on the industrial areas.

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MPs urge new use for Welsh Assembly HQ

BY RAY PERMAN, SCOTTISH CORRESPONDENT

SIX MONTHS ago, I sat over a beer with an executive member of the Scottish National Party while he bemoaned the fact that Scotland had been cheated by fate of its statistical share of by-elections since the last general election. The party was in the doldrums, he complained. It was becoming stale and desperately needed a good campaign to get back into fighting condition.

The contest he wanted to see was for a Labour held seat in the industrial west of Scotland in a constituency where SNP organisation was strong and Labour's weak and where the majority was vulnerable but still big enough to make the Nationalists have to stretch to win.

The executive man had possessed a crystal ball he could not augur.

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The SNP has become a victim of its own election successes and is judged in Scotland by whether it wins or loses seats. Gaining a close second is not sufficient to maintain the party's reputation.

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INTENTIONS

Bill's Ice Cream has marketing head

Mr. Bouchier has been marketing director of Bill's Ice Cream since 1975. He replaced Mr. Moss, who was taken up a senior position in the company. Mr. Bouchier was previously marketing manager of the company from 1975, when he was marketing director of the company.

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Trade & Technical Publishing Expansion Programme Titles Urgently Required. A major International Publishing House based in the U.S.A. and with subsidiary companies throughout the world, wishes to expand their UK based publishing activities. All specialist non consumer journals and magazines will be considered including monthly, quarterly or annual publications. Meetings and negotiations will take place during March at suitable venues throughout Europe. Contact: Walter Boyd 70 Park Street, Apt. 7061, Brookline, Mass 02146 U.S.A. Tel: 617 965 5800 Telex: 922529

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SUCCESSFUL CATERING GROUP OCCUPYING PRIME WEST END SITES AND WITH CONSIDERABLE NET CASH ASSETS SEEKS BUYER. Write Box G.1461, Financial Times, 10, Cannon Street, EC4P 4BY.

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WELL-ESTABLISHED COMMERCIAL STATIONERY/DRAWING OFFICE MATERIALS COMPANY in Surrey for sale. Turnover £100,000 rapidly increasing. Write Box G.1467, Financial Times, 10, Cannon Street, EC4P 4BY.

CHANNEL ISLANDS Opportunity to acquire established wholesale jewellers, by share transfer. Owners wish to retire. Good stocks, good accounts, central office and stockrooms, reasonable rent. Scope for expansion. Principals only. Write Box G.1472, Financial Times, 10, Cannon Street, EC4P 4BY.

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FOR SALE OR LEASE AUSTIN/MORRIS DEALERSHIP Private company with attractive, well-placed Freehold property. Good petrol forecourt, showroom, works area, paint shop, used car display. Owners with flexible attitude, will consider proposals. Write Box G.1468, Financial Times, 10, Cannon Street, EC4P 4BY.

NEW FINANCIAL COMPANY being formed by experienced management with share capital of £20,000. Specialising in leasing/black discounting. Investment required with equity participation available. Write Box G.1468, Financial Times, 10, Cannon Street, EC4P 4BY.

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الشرق العربي في التساوات

BANQUE INTERCONTINENTAL ARABE 67, avenue Franklin Roosevelt Paris Tél: 359.61.49 - Télex: 640340 BIAPA Capital 100 millions F.F. Total of the balance 1975: 1,080,000,000 F 1976: 3,209,000,000 F 1977: 3,564,000,000 F

The Arab World is our business

Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

PACKAGING

Operations combined on one machine

HEAT-SEALING is unsuitable for many types of food and confectionery products and to solve this problem, Koters and Simons have been working on cold-seal applications for food packaging for some time.

They have now succeeded in combining flexographic colour printing and cold-seal adhesive coating on the same machine and claim this is unique in food and confectionery packaging.

By printing on the face of a cellulose film or polypropylene web, followed by application of the cold adhesive pattern in register on the reverse side of the reel, Koters has succeeded in speeding up the wrapping rate for one product line by more than 70 per cent.

This technique is applied on a printing/coating machine line able to print up to four colours flexographically where the coating is applied to very close tolerance. It is equipped specially developed by Simon by linking the Centraflex 434 four-colour press with a purpose-built OXB.

METALWORKING

Produces a better sheave

INSTEAD OF using the traditional method of casting to make rope sheaves, the Johnson-Ruck Corp. of Tulsa, Oklahoma, U.S., uses heat and pressure to forge a groove in the edges of discs flame cut from plate.

Hubs are welded into a hole in the centre of the plates, and the resulting sheaves are claimed to be of a superior quality, which is competitively priced compared with cast sheaves.

Users are provided with an unlimited choice of sheave diameters, hubs and hub configurations, since the process is much more flexible than casting.

Standard groove angle is 30 deg., with depth 1 times the rope diameter. Sheaves made by the process are in the 14 to 34 inch diameter range.

Marketing in the U.K. is by Tonnes Power, Sawbridgeworth Road, Little Hallingbury, Bishop's Cleeve, Herts. (0279 722121). This company says it is negotiating the establishment of a forged sheave plant in this country.

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FEEDSTUFFS

Compact plant turns waste into protein

THREE YEARS' work have enabled a Scottish engineering company to build a compact plant for shore or shipboard installation to produce high protein animal feedstuff from fish waste, where existing equipment can cost more than three times as much.

The unit has just completed exhaustive tests at the Ministry of Agriculture and Fisheries Mammal Laboratories at Hull and the first two production models are to be put into operation in the Shetlands and at Milford Haven in March.

Anderson Engineering (Keith), which carried out development and manufacture, has hitherto built large processing units for shipboard installation.

It decided to develop the new type machinery and put over £200,000 into the work, based on a market research survey carried out in conjunction with Torry Research, Tropical Products Institute and the White Fish Authority.

The new design of plant allows

INSTRUMENTS

Pollution measured

TWO INSTRUMENTS have been developed in the U.S. for measuring airborne pollution—one for diesel smoke, the other for analysing airborne particle size.

The inline full-flow smoke meter is stated to be accurate down to 1 per cent, opacity, with only 0.3 per cent. zero drift over the four hours. It meets both ISO and SAE requirements for smoke meters.

Opacity to 0.1 per cent, and density to 0.01 per cent, is shown on a digital display, and response time is sufficiently fast to enable readings to be taken for each cylinder for diagnostic and design work.

Using quartz crystal microbalances, in a cascade, the particle analyser covers the range 0.05 to 25 microns in particle size, and 100 to 65,000 micrograms/cu. metre for concentration measurement.

It uses established impaction theory to discriminate between the various particle sizes in the analyser by a self-contained pump, and is claimed to be the first instrument to make real time primary mass measurement practicable.

Marketing in this country is by Telonic Berkeley U.K., 2 Castle Hill Terrace, Maldenhead, Berks. SL4 4JR (0428 28067), a subsidiary of the Instruments maker, Berkeley Controls Inc., California.

COMMUNICATIONS

Keeps a check on itself

PUT ON the market by Wandel and Gertrud and made to CCITT specifications by TTI Inc. of California is a test set designed for the commissioning and maintenance of audio channels, mainly in telecommunication circuits.

The instrument has its own processor and memory which, in addition to controlling measurement and transmit functions is also able to test itself, all the results appearing in plain English on an alphanumeric display.

The entire self-diagnostic routine takes about 12 seconds and substantially reduces fault-finding time in the event of equipment failure.

Signal source is a low distortion oscillator covering 30 Hz to 20 kHz, continuously tuned over two hands or used in a push-button mode at preset frequencies.

Level, noise and frequency readings are shown at the same time on digital displays, all range adjustments being fully automatic. Level is auto-ranging from -30 to +10.5 dBm, noise from -30 to +10.5 dBm.

Versions are available for either battery or mains operation, the former weighing only 14 lbs. More on 01-992 6791

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Christopher Lewinton, chief executive of Wilkinson Match.

CHRISTOPHER LEWINTON came to peripheral interests. The 16 years ago by applying the blade, an initiative that d. Gillette back on its British Match was a long-

lished force in the world business. In 1973 they ad an overseas sales force British Match needed in products to sell.

the deal between Wilkin- Match and Allegheny um is proposed, with ar of these products im- ly in mind. It marks a offensive by Wilkinson a market for garden tools in the U.S., where the True er subsidiary of Allegheny 3 per cent of the market, a Britain where Wilkin importance to the garden business is less than its own brand name makes sm. The deal therefore es a significant change of sis in Wilkinson Match's ses.

er the merger in 1973, opher Lewinton, Wilkin- chief executive, evolved a stage plan for the deat of the group. The base was to merge the top ements, to apply common al controls to all parts of mpany, and to dispose of

Acquisition necessary

Right from the start the top management suspected that an acquisition in the U.S. would prove necessary, but it was not until 1976, when the immediate problems of the merger had been tackled, that this loomed in priority. "Then," says Lewinton "it came through loud and clear that Continental Europe and North America had not benefited from the merger. There was a hole in our matrix in the U.S., and we were a one-product company (razor blades) in Europe, outside the U.K."

Phase Two went ahead. Marketing of Wilkinson's consumer products—blades, writing instruments, tools, matches and lighters—was consolidated around the world. Sales of the company's other business, fire-

Why Wilkinson is set on an American partnership

BY NICHOLAS COLCHESTER

At the end of this week, shareholders in Wilkinson Match, the dominant British manufacturer of razor blades and matches, will be shown details of a deal that will leave a large part of its equity in U.S. hands. Allegheny Ludlum, an American special steels company, is to sell True Temper, its garden tool subsidiary, to Wilkinson on terms that will raise Allegheny's stake in the British company to 44.4 per cent.

It was only recently that Allegheny bought 29 per cent of Wilkinson from Swedish Match. The rapid succession of the announcements of the two deals—awkwardly handled because of a leak in Stockholm—left British shareholders suspicious that

Wilkinson was being taken over on the cheap. Despite a revision of terms which deprived Allegheny of the prospect of voting control, the suspicions remain, and it is not certain that shareholders will approve the True Temper deal.

Whether Wilkinson shareholders are getting a good deal can be answered only when the terms are known. But there are other questions too. What motivated this link with Allegheny, a company virtually unknown in Europe? What will Wilkinson's customers and employees get out of it, quite apart from its independent shareholders? The Wilkinson chairman, Denis Randolph, and chief executive, Christopher Lewinton, have told the Financial Times how and why the deal came about.



Robert J. Buckley, president and chief executive officer of Allegheny Ludlum Industries.

Wilkinson's status under the underlying idea remained valid.

Nevertheless it is not difficult to envisage how conflicts of interest could arise. Wilkinson will be a public company called Wilkinson Match which will provide the nucleus of Allegheny's consumer interests. The president of True Temper will report directly to me. My office will remain in London, though I shall often be in New York. The accounting policies will be Wilkinson's, the management style will be Wilkinson's.

Both men tend to play down the significance of the large minority holding Allegheny will have in their company after the deal goes through. They explain that Wilkinson has had long experience of large shareholdings. Mr. Lewinton argues that even if one has a controlling shareholding in a subsidiary it is impossible to impose policies on its Board in the face of united opposition. He categorically dismisses the notion that there could be argument over the allocation of profit between Allegheny and Wilkinson.

Insisted on a majority

Questions however remain. If

Wilkinson is to preserve its independence why did Robert Buckley insist at the start that the deal should leave Allegheny with 51 per cent of Wilkinson?

Mr. Lewinton speaks for him: "He always felt that Wilkin-

son should remain a quoted company—to give it more presence and more flexibility. He insisted at the start on a majority holding. But True Temper's figures did not justify it, and he then saw that even with a smaller holding the

ALLEGHENY LUDLUM'S MAIN COMPANIES.

ALI METALS GROUP (special steels): Allegheny Ludlum Steel; Ajax Forging and Casting; Good Steel Service; Special Metals Corp.; Doreco, Almet.

TITANIUM METALS CORPORATION OF AMERICA (producers of titanium and manufacturers of industrial rings, railway wheels and axles).

ALI CONSUMER PRODUCTS GROUP (garden equipment): True Temper Corp.; Jacobsen Manufacturing; Standard-Thomson Corp.

ALI INDUSTRIAL PRODUCTS GROUP (tungsten carbide products): Carmet Company; Harvill Corporation; IPM Corporation; Chemetron.

WILKINSON MATCH'S MAIN COMPANIES.

WILKINSON SWORD: razors, razor blades, scissors and garden tools.

GRAVNER AND MAY: matches.

GRAVNER: safety and protection equipment for aviation, vehicle, marine and industrial markets.

J. JOHN MASTERS: matches and the Feudor range of disposable lighters and

SCRIPTO PENS: writing instruments.

suggested to Lewinton that if

Allegheny was going to buy the Swedish stake, Wilkinson should buy his garden tool subsidiary. Lewinton agreed to look into it.

The company, which then negotiated a deal which provisionally gave it voting control of Wilkinson, has annual sales of \$1bn. They are in the three main areas: special steels and

metals, consumer products (garden tools, sporting goods, large lawn mowers) and industrial gases and fire protection equipment.

True Temper, the subsidiary that Wilkinson will buy if shareholders agree, sells \$75m. of garden tools, \$25m. of golf-club shafts (in which it is market leader) and metal-frame tennis rackets, and \$25m. of railway track anchors, a lucrative side-

line. Mr. Lewinton calls True Temper "the Cinderella in the Wilkinson Match. Robert Allegheny does not understand the consumer business," Mr.

Attractions of the deal

The two men see the follow-

ing attractions in the deal for Wilkinson:

● It will give Wilkinson substantial turnover in the U.S.

● Wilkinson will commit itself in a big way to the garden

tool market. True Temper will sell Wilkinson products as an up-market brand in the U.S.

Wilkinson will broaden its product range in Britain. This, says Lewinton, will provide Wilkinson in the U.K. with a third consumer products leg—a growing one—alongside matches and blades.

● Wilkinson will benefit from the large U.S. stake because this will open the government/military/aviation market to Wilkinson's Graviner fire-protection equipment. This market is difficult for a foreigner to crack.

● Allegheny already sells special metal products into this same market. It has therefore established contact with the right purchasing agents.

● The deal will broaden Wilkinson's options in the U.S. razor blade market, where the company's share remains at around 7 per cent. Its current distribution agreement with Colgate-Palmolive expires in 1979.

● Allegheny has undertaken to invest in ways that will help Wilkinson sell its products in the U.S. One way will be for Allegheny to buy U.S. companies making complementary products. They will sell Wilkinson products in the U.S. and Wilkinson will handle their overseas sales.

● Wilkinson will more easily attract talented American management.

Turning to the question of with a smaller holding the

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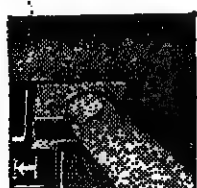
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December 31, 1977

ASSETS	
Cash and demand accounts	\$ 95,775,359
Interest bearing deposits with banks	288,618,168
Precious metals	70,817,841
Investment securities	488,935,857
Federal funds sold and securities purchased under agreement to resell	165,000,000
Loans, net of unearned income	1,255,150,131
Allowance for possible loan losses	(21,505,167)
Loans (net)	1,233,644,964
Customers' liability under acceptances	87,890,900
Bank premises and equipment	15,865,025
Accrued interest receivable	44,681,461
Other assets	71,019,348
	<u>\$2,572,348,921</u>
LIABILITIES	
Deposits	\$2,047,646,981
Federal funds purchased and securities sold under agreement to repurchase	55,422,000
Other liabilities for borrowed money	3,159,756
Acceptances outstanding	89,677,157
Accrued interest payable	91,328,755
Other liabilities	23,157,845
STOCKHOLDERS' EQUITY	
Common stock	100,000,000
Surplus	78,146,591
Surplus representing convertible notes obligation assumed by parent corporation	12,490,000
Undivided profits	71,319,836
Total stockholders' equity	<u>261,956,427</u>
	<u>\$2,572,348,921</u>
Letters of credit outstanding	\$ 101,625,469

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REPUBLIC NEW YORK CORPORATION SUMMARY OF RESULTS

	Year ended December 31	
	1977	1976
Net income	\$19,522,394	\$16,562,371
Net income applicable to common stock	18,860,588	16,562,371
Per share of common stock:		
Net income — primary	\$5.98	\$5.30
— fully diluted	5.48	4.89
Dividends declared	1.00	.68

"On January 17, 1978, the Board of Directors of Republic New York Corporation declared a quarterly dividend to stockholders of record March 15, 1978 to be paid on April 1, 1978 of \$38 per share vs. \$25 per share paid on April 1, 1977.

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An Egyptian blunder

WHEN THE Israeli Defence Forces performed their rescue act at Entebbe 18 months ago, there was widespread admiration for their daring and the manner in which their mission was accomplished. There was similar admiration for the West Germans when they succeeded in freeing the hostages at Mogadishu last autumn. The two acts differed in that the Israelis were operating more or less on their own in territory that could certainly not be considered friendly, while the Germans had the co-operation not only of third countries, but also of the Government on whose territory the rescue was carried out. There were two common factors: one was success, and the other was a general feeling that in the circumstances the Israelis and the Germans were right to do what they did.

Precedents

And yet there were also more considered reservations. The premium on success was high. If the Israelis — and still more if the Germans — had made a mess of it, there would have been untold domestic and international consequences. In the German case, for example, it is difficult to see how Helmut Schmidt could have survived as Chancellor if he had presided over such an intervention, and failed to bring it off. There was also the danger of creating precedents, and indeed Entebbe itself was in a way a precedent for Mogadishu. Yet if the Israelis and the Germans could get away with such actions, why should not others follow suit? There was the further danger, moreover, that they might do so at times when the case for military intervention was considerably less clear-cut.

That is precisely what has happened with the Egyptians. It is hard to believe that they would have acted as they did in Cyprus last week-end if the precedents had not been set. But, unlike the Israelis and the Germans, the Egyptians failed to make adequate preparations. It is not even clear that their forces had a detailed battle plan in mind; they may even have lacked the right equipment. Unlike the Germans, they failed to secure the co-operation of

the authorities on the ground, though there may have been some genuine misunderstanding here. What is worse, they intervened at a time when it was unnecessary to do so: negotiations on the freeing of the hostages were already well under way. And, worst of all, they botched it.

There are two general lessons to be drawn. The first is that still greater attention needs to be given to the prevention of hijacking and anything related to it. It is mildly encouraging in the present case that no Arab country was prepared to allow the aircraft to land. But, in general, the rules at airports are still too lax: authorities are still too often unprepared to deal with what has become a relatively frequent occurrence; and the practice of refusing landing permission to hijackers has yet to be turned into a proper international convention. Such a convention needs to be enforced by a readiness among international airlines, backed by Governments, to withdraw services from airports which are in any way soft on hijacking.

The second general lesson is that there needs to be international machinery to deal with hijacking and the taking of hostages, if prevention has failed. The practice of one country taking the law into its hands and seeking to perform its own rescue act is dangerous — as the Egyptian example has shown. What is needed is an international rescue squad, properly trained and properly equipped for the business of disarming hijackers. That this can be done was demonstrated by the German experience at Mogadishu. The German operation came as close as it was possible to come to an international operation, and it worked.

Crime

It is important, of course, to have the co-operation of the authorities on the ground, as the Germans did. But it would be itself a revealing exercise to see which countries would refuse to subscribe to such a convention. The alternative is an invitation to international lawlessness which would be almost as bad as the crime which it seeks to defeat.

Britain's role in NATO

YESTERDAY'S Defence White Paper has already been attacked by the Left as a surrender to the "warhawks" and by the Right for "duplicité". But it is unlikely to remain a controversial document for very long. There is indeed virtually nothing new or surprising in it, as most major decisions had already been announced over the past few months. This may have been necessary. It has been suggested, to pre-empt Left-wing attacks on the increased defence spending that the White Paper sets out in detail. But whatever the reason, the effect has been to confirm Whitehall predictions that the Paper would not be very exciting.

Commitment

Two points, however, stand out. The first is the strength of the Government's commitment to NATO and to current plans to strengthen the Alliance's forces. The three per cent increase in spending due in 1979-80, first revealed in January's Public Expenditure White Paper, may not be enough to compensate totally for earlier cuts. But it is in line with the Allied target agreed last year in response to President Carter's call for a strengthening of the West's capabilities and has already been welcomed in Brussels. In view of the Left's traditional sensitivity over defence spending, it would probably be unreasonable to have expected a Labour Government to do much more.

For the years further ahead, the Government has limited itself to the same commitment it made in January. The NATO objective is a 3 per cent spending increase in real terms in each of the five years starting in 1979. So far, however, the U.K. is cautiously only accepting another 3 per cent increase in 1980-81, leaving the three following years subject to review "in the light of economic circumstances". This is in accordance with the escape clause accepted by the Alliance's Defence Ministers, who agreed that countries might be allowed to miss the target if their economies could not stand the strain. But NATO has made it

clear that other things being equal the U.K.'s North Sea oil will almost certainly disqualify it from pleading poverty.

As it is, the White Paper goes out of its way to demonstrate to other NATO members that Britain is already pulling its full weight. The Government says that the share of the country's GDP devoted to defence spending was down to 4.9 per cent in 1977, from 5.1 per cent the year before. But it also publishes figures to show that this still keeps Britain firmly in second place after the U.S. Another point it stresses is that the U.K. last year spent a higher proportion of the defence budget on major new equipment than any other of 11 member countries investigated in a NATO survey.

That, of course, is not the sort of information designed to mollify the Labour Party left wing, and the Government feels the need to back it up with a well argued case for strengthening the Alliance. Not only does it spell out all the improvements recently made in the Warsaw Pact forces, but quite rightly points out that the further the Alliance falls behind in conventional capability, the further the nuclear threshold will be lowered.

It is equally correct to point out that there is no sign that détente has led to any slackening in the pace of the Soviet Union's military effort.

Controversy

The White Paper's presentation of the military balance raises the second point that has caused controversy — the inclusion of French forces in West Germany and the Atlantic in NATO side of the equation. It is, of course, true that these forces are not officially integrated into the Alliance's military command. It is equally true that it is virtually impossible to imagine a major East-West confrontation in Europe in which they would not be fighting alongside the Alliance's forces. It may be unwise to try to calm anxieties about NATO's real weaknesses by such methods, but it hardly amounts to "duplicité".

WESTERN Governments reluctantly are coming to accept that they will not get what they wanted from the 35-nation East-West security conference in Belgrade. With the conference well past its scheduled mid-February end, and sustained only by ad hoc procedural arrangements, the general view in Belgrade is that only a miracle can now save it.

The West originally came to Belgrade with ambitious hopes. The aim was, first, to engage the East in a genuine dialogue on the implementation of the 1975 Helsinki Agreement, which set new principles for the conduct of East-West relations, including respect for human rights. The Western tactic was to be firm on Eastern shortcomings on human rights, but not to single them out for exclusive attention. The other major economic, military and political aspects of the Agreement were to be fully examined as well. At the same time, the West was more than ready to admit shortcomings on its own side, in the hope of stimulating a real debate.

Movement of people

The second main aim was to devote the latter part of the conference to the drawing up of a "substantive" concluding document containing a fair assessment of how far the Helsinki Agreement had been respected, in the light of the earlier debate. The West wanted the document to contain the clearest possible reaffirmation of the Helsinki commitments, particularly on human rights, and agreement on a new series of more specific commitments. A key Western objective was the free movement of people facilitating human contacts, such as East-West marriages and family reunification by easing procedures for the granting of visas (both entry and exit), passports and marriage licences. A second aim was to develop the so-called "confidence-building measures" decided at Helsinki, under which each side agreed to be more open about major military manoeuvres.

There was also a whole range of other Western proposals covering items such as a businessman's access to the end-user of the product he was trying to sell, journalists' working conditions, and the publication of statistics. An important political point was to be that individuals in any country should be free to conduct their own monitoring of the Helsinki Agreement without the sort of Government interference and harassment that has occurred in the Soviet Union and Czechoslovakia. The total effect, in Western eyes, would be to give important new impetus

to East-West co-operation and détente. Such an approach was bound to put the Soviet Union on the defensive. During the review stage of the conference, from the beginning of October to just before Christmas, Mr. Yuri Vorontsov, the chief Soviet delegate, on several occasions threatened to walk out of the conference, arguing that the West, and particularly the U.S., was interfering grossly in his country's internal affairs.

The Soviet Union counter-attacked by launching a series of disarmament proposals, such as the non-use of nuclear weapons, which it knew the West could not accept.

Other East bloc countries drew attention to Western violations of rights such as those of women and racial minorities, and the right to work. But if the temperate dialogue sought by the West never materialised, western delegates at least claim credit for having got away with a comprehensive and fairly public statement of their views on human rights violations before an official Eastern audience for the first time ever.

It is noticeable, however, that people like Mr. Arthur Goldberg, the leader of the U.S. delegation, are increasingly stressing the relative success of the first part of the conference even as the second part is lapsing. Dr. David Owen, the British Foreign Secretary, has taken the same line. Both may clearly realise that there is going to be little to show for the work on the concluding document that has occupied the Belgrade negotiators since the conference resumed in mid-January.

Tougher line

The first sign that the final month or so was going to be rough came on the very day the conference re-opened, when the Soviet Union tabled a short draft concluding document that made not one single concession to either the Western viewpoint or that of the nine neutral and non-aligned countries at the talks. Since then, Moscow has taken a much tougher line than it did during the conference review period.

Western and neutral negotiators complain that the Russians have made their task virtually impossible by insisting that the concluding document must neither repeat the language of the Helsinki Agreement nor go beyond it. The Soviet Union and its Allies have consistently refused to agree to any text that suggests that there have been shortcomings in the implementation of the Helsinki Agreement. The nearest Moscow has



Setting out on a pitfall-strewn path: heads of the U.S. and Soviet delegations, Mr. Arthur Goldberg (left) and Mr. Yuri Vorontsov, chat on the opening day of the security talks last October.

come to admitting that everything is not rosy was in a text submitted at the end of last week. The final Russian offer, as it was described by Mr. Vorontsov, suggested that the participants should note with satisfaction that the process of détente "has continued" and "obstacles encountered." That is obviously not good enough for the West or the neutrals, who have taken a very similar line to the NATO countries.

The similarity of the neutral and Western positions has, if anything, complicated the negotiating process. The neutral and non-aligned countries normally would be ideal go-betweens to negotiate a compromise between the two sides. But their own proposals for a concluding document ran much more towards the West than the East, and are in important parts unacceptable to the Soviet Union.

A French attempt to produce a compromise failed to satisfy either side at the end of last week, with most Western delegates suspecting that the main aim of the move was to present President Giscard d'Estaing in a state of light, mediating between East and West on the eve of next month's crucial

general election. It was regarded as ironic in Belgrade that he was actively soliciting Soviet support for his initiative in order to strengthen his hand against the forces of the French Left.

The choice now facing the West is to accept a concluding document so lacking in substance as to be unacceptable to vociferous sections of public opinion, or to abandon altogether the attempt to negotiate a "substantive" agreement. Officially, Western and neutral delegates have still not given up trying to budge the Soviet Union. But nearly all of them now believe that they will have to go for the second option.

This would mean publication of only a brief communiqué, noting that the meeting had taken place, established two or three working groups and agreed to meet again in Madrid in 1980.

Each country would then say what it thought of the conference's failure as loudly as possible at the final public session towards the end of this month or early next. Until the Swiss took the plunge and proposed just such a solution yesterday, neither side wants to concede to the other a propaganda victory by being the first to propose such a negative solution.

It cannot be ruled out that the Soviet Union will make some last-minute concessions. That is its normal way of doing business at international negotiations. But even if it does, it is almost inconceivable that the concessions could satisfy the West on such key issues as human rights, human contacts and "confidence-building measures".

The game that is being played by both sides at the moment is that of trying to ensure that the other takes the blame when failure is finally admitted. Thus the West is still saying it is prepared to keep the meeting going for as long as there is a prospect of agreement on a concluding document, while the Soviet Union, which started a flurry of activity ten days ago, is rapidly producing new versions of its January proposal. By last Friday, the original, three-page Soviet text had grown to 12 pages in a bid to show that it was not Moscow that was refusing to be co-operative. That text, too, was rejected by Mr. Goldberg, leaving Mr. Vorontsov to say he would make no further proposals. "Enough is enough," he told the Press. "It is the beginning of the end."

Western diplomats are now admitting that they may have made some mistakes. It was a rash always unrealistic, they now realise, to expect the Eastern countries to engage in a frank dialogue on human rights given the current state of East-West relations and at a time of mounting internal disaffection in the East. The West also, they believe, put forward far too many proposals for specific action. With the East deciding to respond by matching each Western proposal with one of their own, such documents on the table by Christmas — far too many for a negotiation that was due to last only one more month.

The West also does not accept the comfortable thesis that détente would suffer. Although there is a direct link between the two, the West believes that the direct link between the two is broken. The West believes that the direct link between the two is broken. The West believes that the direct link between the two is broken.

concession it wanted from West — the holding of a conference to confirm the war division of Europe. — on the contrary it is the time it has no such imperative. That is in the position of détente.

Moscow has clearly been long that it can get away refusing the West's demands without provoking a fresh outburst from the West. The West's delegation has stressed liberalisation is continuing, without the need for specific new commitments. The West's delegation has stressed liberalisation is continuing, without the need for specific new commitments. The West's delegation has stressed liberalisation is continuing, without the need for specific new commitments.

Consequences of failure

Significantly, however, officials have recently privately sounding out Western colleagues on the consequences of failure, expressing the hope that it would not be "overused" by the West. The reply has been that there is no way Western Governments would be able to use a strong public reaction if they wanted to. They themselves feel obliged to toughen closing speeches I grade. The outcry would, of course, be even greater if Moscow were to see the new trials of dissident moment Belgrade is over.

The West also does not accept the comfortable thesis that détente would suffer. Although there is a direct link between the two, the West believes that the direct link between the two is broken. The West believes that the direct link between the two is broken. The West believes that the direct link between the two is broken.

Helsinki repeat

Many Western delegates also believe Mr. Goldberg persisted far too long in the autumn with his attacks on human rights violations. It would have been better, they believe, to have made his point quickly and then moved on to other matters. Nevertheless, the outcome is unlikely to have been very different had Mr. Goldberg held himself more in check. The Soviet Union was always determined this time not to repeat its Helsinki mistake of conceding too much on human rights. In any case, in the run-up to Helsinki, Moscow had a major

MEN AND MATTERS

Canada takes a pelting

When those serious men at the Canadian High Commission in London arrived yesterday for their work, they found a huge billboard outside Canada House showing a baby harp seal being clubbed in death and proclaiming: "Canada's politicians, not pity tolerate a Stone Age economy in Newfoundland. The civilised world urges Prime Minister Trudeau to find other employment for the 200 or so men who are brutalised at the harp seal hunt." Hardly the advertising jingle of the year, but nonetheless a straightforward declaration of war by the seals' self-proclaimed protectors, the International Fund for Animal Welfare.

Worse was to come later in the day when in the Savoy a panel of Newfoundland government experts found themselves heckled by the IFAW's executive director, Brian Davies. Looking like a slimmed-down Ustinov, he was not too impressed by Newfoundland Premier Frank Duff Moore's claim that killing the seals provided full-time employment to 2,000 people and part-time work for 4,000 people.

To them, seals are a resource like seaweed, the population is growing and could support the killing of more than 130,000 cubs per year; in any case, said Moore, the method of killing used is "humane." It consists of smashing the skulls of the trusting two-week-old cubs with a club appropriately called a hakkapik. They are then skinned, with half the sealers' income coming from the pelt and the rest from the flippers — eaten by Newfoundlanders as a delicacy — and the fat which is even incorporated in chocolates. The issue has become international politics. At Strasbourg last month few parliamentarians turned up to the debates on human rights, but there was a

full house for seals. Here Brigitte Bardot's presence perhaps helped and her intervention with President Giscard d'Estaing has since led to a ban on seal imports being imposed in France. Back at home Canadian parliamentarians have been numbing about cruelty to grapes and geese by the French and threatening retaliations, while Trudeau himself has written soothingly to Bardot.

But now Davies, who works with Richard Adams of Waterbury Down fame, is trying to get Britain to ban the imports, pointing out that the U.S. Congress has not only done so but has condemned the killing. He is having posters put up for a demonstration in Trafalgar square on March 2 and was breathing fire and thunder against Moore for criticising his salary of \$45,000 per year.

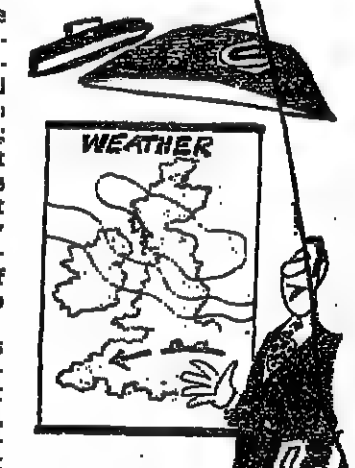
He would have ferried journalists to the seal seals this year, had he not a Canadian sentence for disturbing the seals by flying a helicopter under 2,000 feet. But, proving he is earning his salary, he was off last night to Frankfurt. Premier Moore's "travelling circus" is due to speak there and Davies is all set to heckle again.

Socialist sexcess

In the course of a five-hour speech to party functionaries last week, East German Head of State Erich Honecker asserted that national policy was strengthening the population's feeling of social security. "This security is being expressed by the increased birthrate and by the love of children. Last year alone, 27,000 more children were born than were planned by the Plan Commission."

Put out the light

Earlier this year, it looked as though public investigations by



"A hot air stream in the form of Mr. Denis Howell is approaching the West Country..."

A House of Commons select committee into the life of light bulbs was becoming, as one might say, almost incandescent. But any interested users attending to-day's session to hear David Meiklejohn, the only consumer witness before the committee, will be in for a bitter disappointment. They may even have some quizzical thoughts about the openness of the committee.

Research engineer Meiklejohn has put together an 18-page presentation of his case, at the committee's request; but not a word of this will be heard in public.

The last time Meiklejohn appeared, he was warned by Arthur Palmer, MP, the chairman, against uttering in the corridor his accusations that lamp company witnesses had lied before the committee.

The accusations were described by Palmer — himself an electrical engineer — as an indictment of the whole of the

British lamp industry. Now it seems the committee has devised a strategy for clipping Meiklejohn's wings. Even in the committee room, where witnesses are protected by Parliamentary privilege against accusations of slander, he may not air his views. A hearing planned for last Wednesday was postponed so that Meiklejohn could collate his argument. This has now been done, and the unrepentant Meiklejohn assured me on the telephone, before setting out from Fife for London that evidence given earlier by the companies was "wishful thinking or just sheer ignorance."

To shed some light for the much-criticised witnesses, notably Thoro, Philips and EEC — the committee has written to each enclosing the latest Meiklejohn evidence. It has given them the chance to reply before to-day's hearing. But neither these replies nor Meiklejohn's original criticism will be freely available. A spokesman for thorn told me yesterday that there was no intention of publishing its answers at any time.

So instead of charge and counter-charge, this afternoon's session will see the committee turning its tables on Meiklejohn, calling for him to defend his accusations in the light of the reply from the lamp industry which he has not seen. Of course, then the committee finally publishes its report, it may make a evidence public. Or it may not.

Levelling off

Overheard at a Birmingham factory canteen: "I don't mind sticking to the 10 per cent limit — provided the power workers get a bigger 10 per cent than the miners."

Observer

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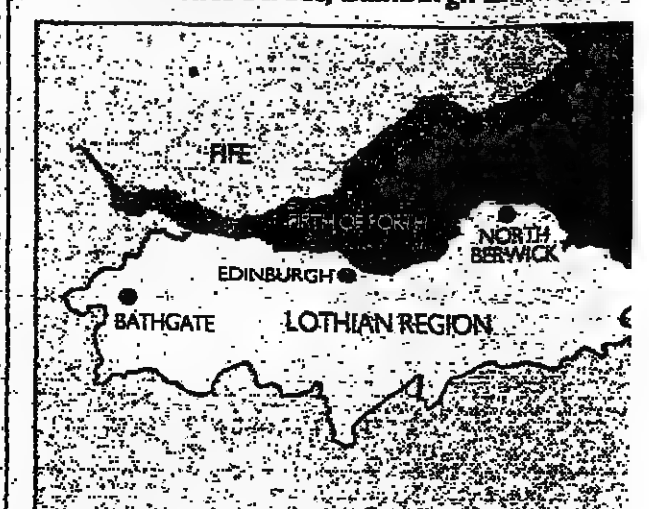
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FINANCIAL TIMES SURVEY

Tuesday February 21 1978

THE COMPUTER INDUSTRY

The arrival of the minicomputer as a major force in the computer industry has coincided with a period when serious inroads have been made into the U.S. companies' domination of the market.

ENTIRE of gravity in the U.S. is shifting away from the mainframe, according to Arthur D. ADL, the international consultant, consultancy company. In a recent testimony at the Justice Department's International Business Machines (IBM) anti-trust hearing, ADL indicated in a submission that, by 1981, about 52 per cent of the world's computer installations would be outside the U.S. compared with 47 per cent at the start of 1977.

significant, for governments seeking to foster their own data processing industries. The ADL finding that the U.S. market would drop to 47 per cent from 71 per cent in 1977, however, represents about 66 per cent of all installations.

would raise the money of the American companies' share to 18 per cent from 13 per cent in 1977. During this time that the European market share of U.S. companies rose to around 35 per cent.

tributed the growing U.S. share of the computer market to what it is increasingly nationalistic "foreign governments." ADL did not extrapolate the trend lines. But if the market share moves to 1985, which is where projections are aimed, the foreign share would be 52 per cent, and the U.S. share would be 47 per cent.

Action

But with annual growth rates in the U.K. and elsewhere of around 40 per cent, at present in installations of minis, largely bought from the U.S., it seems clear the ADL expects action in this sector by governments to alter the projected American market share.

Indeed, this action has already been forthcoming from the French Government, which has set a goal of 45 per cent of the minicomputer market by the end of 1980.

In Britain at the start of 1977 there were close on 13,000 imported minis in use against 3,600 home-built models. Among the domestic suppliers GEC was the market leader with 1,882, followed by Ferranti with 791, Digico with 750 and Computer Technology with 445. Three U.S. companies are well ahead of the U.K.'s best — Digital Equipment Corp with 4,337

Of course that is not the end of the argument, since in most cases the value of the central processor itself is only a small part of the total cost. The rest is peripherals, communications equipment and so on.

Britain was in deficit to the tune of about \$400m. during 1977 for imports of peripherals

and sub-assemblies. It is certain that a large part of the \$650m. European deficit in data processing trading with the U.S. came from this particular sector, and mostly for special peripherals.

But Britain has several companies making appropriate displays and printers, tape readers

and the like, which can be used to build up excellent mini-systems. What is needed is the opportunity to mass-produce, and this can only come about through agreement at European level.

If the French minicomputer group SEMS can turn over as much in 1977 as CII Honeywell Bull, and secure an agreement with Calcomp for the latter to use SEMS computers world-wide in Calcomps well-known plotting

machine range, there is no reason why U.K. companies should not grow just as well. Of importance in this sector is the reaction of market analysts in the U.S. to IBM's own mini, which the company has called Series one and prefers to describe as a small general purpose computer. The general opinion is that IBM would not capture more than 15 per cent

But Amdahl in 1977 pushed up sales by 103 per cent. to over \$188m. and, more important, raised profit to \$37m. after tax against \$22m. It has just shipped its 100th machine—which, it must be remembered, displaces the biggest IBM equipment—and will start production in Dublin soon. Intel has just reported 1977 figures of \$402m. after \$260m. and profit at \$31m.

It could happen that an IBM user might go over entirely to an Amdahl machine with, say, major peripherals from Memorex or BASF. The software would not know the difference, but computer consultants are telling potential customers that their bank accounts must certainly be kept up to date. It remains to be seen how IBM would react on the maintenance side. But since Amdahl is already operating a diagnostic service from a specially equipped centre in the U.S. that "plugs in" over telephone lines to any equipment that looks as if it might be giving problems and determines, remotely, what action to take before an engineer goes out, there is little cause for concern. At the same time, the new LSI machines have an unprecedented level of reliability.

There are thus several major factors behind the Arthur D. Little projections. Governments' "nationalistic" moves on large machines and minis, perhaps with minis to come; erosion of the larger machine market by the mini; the onslaught of the plug-compatible companies on all sectors of the IBM market, with perhaps other companies such as ICL in line for special attention; and last but not least, growing consumer resistance.

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Challenge to the U.S.

By Ted Schoeters

Banks know whom to trust.

1,400 Olivetti TC800 terminals update a Canadian banking network.

The problem progressively update a banking data transmission network that spans continent vaster than all of Europe — four thousand miles from coast to coast. In the process, to automate in real time the counter and back-office transactions of most of the bank's more than 1,700 branches.

The customer Canadian Imperial Bank of Commerce is one of the world's largest banks with assets in excess of 30 billion dollars. In Canada it has the largest work of branches with representation in all ten provinces and the two northern territories. Several remote communities in the Arctic are served aircraft while a shipboard service is available to communities along the Lawrence river.

The solution install intelligent banking terminals at most banking locations. The trial order calls for the installation of 1,400 Olivetti TC800's in branches in the provinces of Quebec and British Columbia and in the city of Ottawa, country's capital.

The choice a bank had excellent experience with an earlier generation of Olivetti banking terminals. To integrate into the bank's main on-line network the machines in which these earlier units had been installed and to expand the network to many other branches, the TC800 was chosen because of intelligence and outstanding capabilities in large data processing and transmission networks.

Over 80% of Australia's banking terminals are supplied by Olivetti.

The problem To assist Australia's financial institutions in serving the country's fast-expanding economy with flexible and reliable terminal systems for on-line handling of all banking transactions.

The customers The biggest savings banks and building societies in Australia, including the Commonwealth Banking Corporation, State Bank of Victoria, Savings Bank of South Australia, State Wide Building Society, Hindmarsh Building Society, United Permanent, Joint Services Network, and others.

The solution The new Olivetti TC800 intelligent terminal system. In a country where 80% of the banking terminals already in use were supplied by Olivetti, today's market eagerly welcomes the TC800, reaffirming the success of earlier Olivetti systems. An outstanding example: at the Commonwealth Banking Corporation, which uses one-third of the systems installed in credit institutions throughout Australia, all the terminals were supplied by Olivetti.

The choice Olivetti TC800 terminals are being chosen in preference to those of other major manufacturers because they are intelligent enough to function outstandingly on their own, yet can be adapted easily to join any network. The high reliability of Olivetti after-sales service is another important factor in their selection.

3,500 extra Olivetti TC800 systems reinforce banking services in Japan.

The problem To achieve real-time automation of counter transactions in savings banks and in banking service departments of agricultural consortia in Japan. Also to administer other services provided by the consortia for their members, such as insurance coverage, the collection and sale of agricultural produce and the purchase of implements for farming co-operatives.

The customers Eleven of the most important agricultural consortia (Nokyo) and savings banks in Japan.

The solution Olivetti TC800 intelligent terminal systems, which have raised distributed data processing to a new level of efficiency. Over 500 TC800 systems are already operational with these institutions and orders have been placed for an additional 3,500 systems valued at \$ 63 million.

The choice The Japanese, who are amongst the world's most knowledgeable experts on electronics and computer technology, were won over by the outstanding capabilities and reliability of Olivetti TC800 terminals. Olivetti systems were chosen in preference to those of major Japanese and world manufacturers, competing in one of the world's most advanced and sophisticated markets.

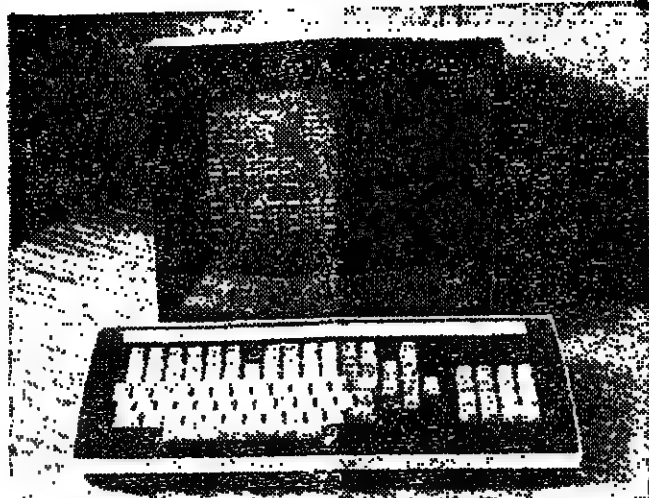
Companies everywhere are choosing Olivetti systems
Here are the latest world-wide totals: 330,000 accounting machines;
140,000 data processing systems and personal mini-computers;
65,000 terminals and data collection units; 150,000 teleprinters and
telecommunications units.

THE INTELLIGENT CHOICE IN DISTRIBUTED PROCESSING

olivetti

THE COMPUTER INDUSTRY II

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ForeWord is the word processing package

which the data processing manager can now offer his company as a cost effective addition to distributed processing.

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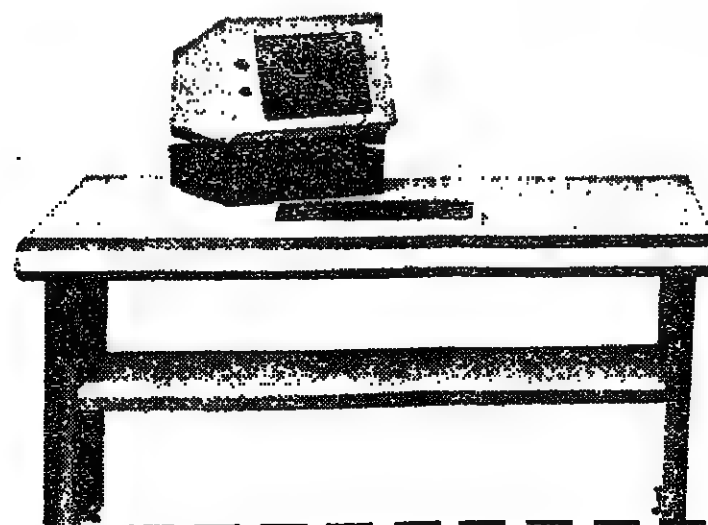
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Merger fever

IN RECENT months, Honeywell Information Systems and its French partner CII-Honeywell-Bull have been reviving the talk about mergers of computer manufacturers in Europe.

At the same time, Siemens in Germany has been having active talks with Fujitsu of Japan, with whom it has a long-standing association. Both Siemens and Fujitsu have denied rumours emanating from Tokyo that a formal agreement is imminent by which Siemens would market Fujitsu's newest large computers in Europe. On the other hand, there is good reason to suppose that the possibilities of a closer tie-up are being carefully considered.

International Computers Limited (ICL) in Britain, has, on the other hand, shown no public sign that it is interested in joining any merger fever at present. It is now in a good period of strong growth and increasing profitability which gives it at least temporary relief from the pressure for mergers in the industry at large.

These pressures arise inevitably from the overwhelming dominance of IBM with over half of the world's computer market, its huge expenditure on research and development (about \$1bn. on all products) and its ability to cut prices if it wished to a point which would threaten competitors with extinction.

CII-Honeywell-Bull recently produced an interesting set of figures based on the premise that the minimum research and development budget needed for each general purpose computer manufacture is \$100m. a year. On this basis, it estimated the profit of a company the size of IBM would be about 30 per cent. on turnover. The profit of a company a quarter the size would be 15 per cent. of turnover, but the profit of a company one-eighth the size would be only 3 per cent. of turnover. CII-Honeywell-Bull, together with its U.S. parent, comes into the second category, but ICL and Siemens's computer division come into the third size grouping which should, in theory, be barely profitable.

Struggle

From this the CII-HB men argue ICL should consider coming in with the French-American grouping or at any rate consider some partner for the struggle of the 1980s. ICL could justifiably retort that the theoretical analysis has not been borne out in practice, since its profits have been much better than 3 per cent., and show every sign of continuing to be healthy. The data processing division of Siemens, on the other hand, has not been profitable in the past few years, though it has shown signs of improvement recently.

One reason that smaller companies have been able to do better than the CII-HB analysis suggests is that they have tended to specialise either by geographical area or by product or a combination of both. They have not therefore had quite the same marketing and service overheads of companies which have spread their nets more widely. Another reason is that the data processing market has continued to expand so rapidly that there has so far been room



The 470V/5 high speed general purpose computer designed for large scale data processing being tested at Amdahl in California.

for everybody to grow.

In the next decade, however, it is likely that the industry will become increasingly tough for companies which have not achieved a respectable size in comparison with IBM. One reason is that the continuing development of miniature components is likely to lead to a new generation of large computers being developed in the 1980s. This development takes advantage of cheap high performance microprocessors and very large semi-conductor memories, will require a heavy expenditure on research and development both for the hardware and the software.

When the new systems start to emerge, manufacturers will once again have to go through the problems of upward compatibility: that is devising methods by which old software can be run on new machines without highly expensive conversion into a new code.

When this happens, it may be that the barriers between different machine systems which at present separate companies may seem less formidable. New groupings could then emerge more easily.

One obvious grouping, which has been much discussed over the years in Brussels would be a pan-European computer company consisting perhaps of ICL and the data processing divisions of Philips and Siemens. The possibility of French co-operation has become much less likely since CII withdrew from the European Unidata in 1975-76 and threw in its lot with Bull and Honeywell Information Systems. The collapse of Unidata, formed out of CII-Bull, Siemens and Philips has, indeed, given even the most enthusiastic pro-Europeans pause for thought.

In any case Siemens has been developing large IBM-like machines whose systems differ markedly from those of the new ICL range. A more natural grouping might be for Siemens to throw in its lot with Fujitsu which has also developed IBM-compatible machines.

Links

Siemens has long-standing links with Fujitsu and its recent talks have probably been on the subject of exchanges of research information and on software development.

If a formal tie-up were agreed, ICL would certainly be left in an exposed position. It might then be forced to look for a U.S. partner as CII-Bull did, perhaps National Cash Registers. Or it could accept Honeywell's apparently standing invitation to join the club.

Such a regrouping would, however, leave Europe without any independent large general purpose computer company, since Philips is now concentrating on small systems. It would be a very different result from that which the main European governments have been trying to achieve through massive subsidies and protectionist procurement policies.

In France, Germany and in the U.K. it has been taken as axiomatic that a strong independent computer company is a strategic necessity, strategic in an industrial sense, but in the long term also from a military point of view. Each country has poured subsidies into main-frame companies, which have all been through periods of difficulty and loss-making. At the same time the governments, as one of the major purchasers of computers have either tacitly, or as in the U.K., explicitly followed a policy of purchasing from their national company. The main effect of these procurement policies has been anti-American, or more particularly anti-IBM, since it was considered impossible for fledgling companies to thrive unless the great American eagle was fenced out.

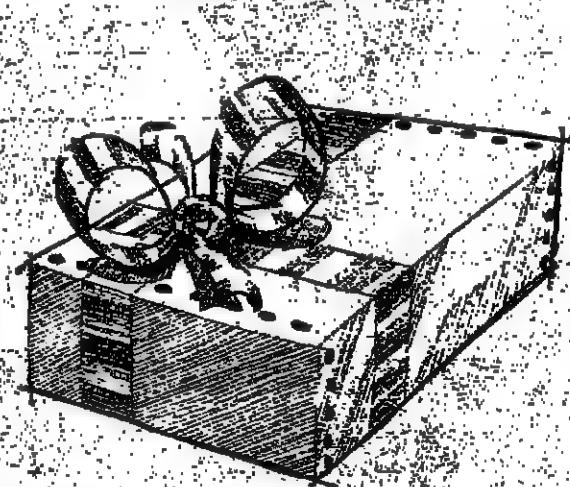
This protectionism was probably necessary to the ambitions of each country to build up a further concentration in future. The Fujitsu group, thus, has a relatively large 'home market' (where IBM has been kept to 30 per cent. of the market), provide a home market large enough to give a company a secure home base against U.S. attack in the world market.

None of these conditions is particularly true, applies to Europe where the 'home market' is divided: the components industry is weak and Government policies not very nationally minded.

The European Commission answer has been to try to liberalise the procurement rules. So from 1980 onwards, it will be more difficult for governments to give exclusive contracts to their domestic suppliers. Government contracts will have to be open to competitive tender. It is less doubtful, however, whether the changes will benefit the European computer companies. IBM, Honeywell and other U.S. companies have large enough manufacturing plants in Europe to qualify as European companies. It is more than likely therefore that the opening up of contract West German market alone, will benefit them at least as much as it will promote companies. Such a concentration has been achieved in Japan where the Government has helped to form a consortium of

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THE COMPUTER INDUSTRY III

The Japanese enigma

IS a wry saying in the computer industry that in ten years only three manufacturers will be left: IBM, the Japanese and one other. The saying which is often repeated shows little doubt about the present position of the three companies in the U.S. market. In the U.S. market, IBM has been the dominant force for many years. It has a long history of success in the computer business, and its products are widely used in government, business and industry. The Japanese, on the other hand, have been making rapid gains in the market, and are now a major force to be reckoned with. The "one other" company is not yet known, but it is expected to be a significant player in the future.

On the other hand the market for steel, unlike that for computers, is rapidly expanding. The steel industry is a major part of the Japanese economy, and it has been a source of strength for the country. The steel industry has been able to expand its production and export capacity, and it has been a major factor in the Japanese economic success. The computer industry, on the other hand, is a more volatile market, and it is subject to rapid changes. The Japanese enigma is that while the steel industry has been a source of strength, the computer industry has been a source of weakness. This is a paradox that needs to be explained.

puters have been reorganised, with Government help, into two basic groups. The larger, headed by Fujitsu, includes Hitachi and Mitsubishi. The other main group consists of Toshiba and Nippon Electric. In terms of world markets it is the Fujitsu group which is most important, because it has developed the FACOM-M series of machines which are compatible with the IBM system and can plug into any IBM installation. This series was developed in conjunction with the Amdahl Corporation of America in which Fujitsu holds a 27 per cent stake. The largest in the Fujitsu range is reckoned to have about the same power and performance as the latest 3033 machine from IBM.

The Fujitsu group is therefore well poised for a major battle with IBM in conjunction with its U.S. ally, Amdahl. Delivery delays on the 3033 series could help both companies to obtain orders from large installations which have war savings enough to buy three survivors.

Moreover the Japanese, in repeated prognostications, have advanced into the future as yet only a few months in the West.

On the other hand there has hardly been an industry which the Japanese have taken up without eventually taking a large slice of world trade. Most observers believe that what has happened in shipbuilding, the automobile industry, and consumer electronics could easily be repeated in computers.

And if it does, the result is almost certain to be a fierce international price competition which some of the smaller companies might find it difficult to survive. Furthermore, if a major Japanese thrust into this market does occur, it is likely to happen in the relatively near future.

There are several reasons for this: the first is an overall strategic consideration: that Japan is finding it increasingly difficult to expand exports for its existing industries. Voluntary restrictions or the threat of tariff barriers are now looming against its exports of televisions, motor cars, ships and steel.

It must be remembered also that although Japanese exports are relatively small, its home market is the second largest in the world, almost half the size of the U.S. domestic market and roughly the same size as the whole of the European market. On the other hand, about 27 per cent of the Japanese market is held by IBM compared with about 38 per cent of the home market which falls to the Fujitsu group.

It is clear, therefore, that at least some of the impetus behind the development of the Japanese computer industry was, and remains, the need to defend itself against IBM. The component research project was certainly inspired partly by the

purely economic point of view, labour needed in both the manufacturing process and in subsequent maintenance of the systems is very severe. Labour implications are therefore likely to be a significant brake on the development of this market.

The other major uncertainty about any predictions for the future results from the very rapid breakdown of boundaries between almost all types of equipment in the data processing field.

First small microcomputers (computers on a chip) are increasingly usurping the functions previously reserved by the mini-computer manufacturers, particularly in process control and other specialist applications.

At the same time, the mini-makers have been retreating into their own small machines like the Digital Equipment Corporation's LSI 11, a mini-computer the size of a biscuit tin, which has the advantage of the considerable software back-

up developed for DEC's larger machines.

Europe. Software now represents about half the cost of a computer, and the software required for a particular application is often of crucial importance to a customer choosing between rival tenders. In this area of applications software, the Japanese are in general handicapped by the difference between Western and Oriental business procedures and more particularly by the language barrier.

This deficiency represents a possible major opportunity to the British and American software houses which specialise in writing programs, but do not manufacture computers. Indeed, the Japanese Ministry of Trade and Industry (MITI) has recently made an informal approach to the U.K. Computer Services Association which represents the software industry.

From a purely national point of view it may be argued that British software expertise should not be used to help the Japanese to compete with the British manufacturer, ICL. On the other hand it will be said that a partnership with the Japanese would be a way of securing an important slice of business for the U.K. and when the competition intensifies.

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One certain trend that can be discerned through these uncertainties is the change of emphasis from hardware to software, which is likely to continue for at least the next ten years.

The rapid fall in the price of components, which will continue with the development of very large scale integrated circuits, will reduce the added value of hardware. As a result most manufacturers are increasing their emphasis on the provision of complete systems in which software can be about 50 per cent of the total cost.

These are considerations governing the outlook for the next decade. In the shorter term, most manufacturers are looking for a steady growth continuing at about last year's healthy level.

In 1976, the U.S. consultants Arthur D. Little estimated the installed base of general purpose computers worldwide to be about \$87bn., of which just over half, about \$46bn., was in the U.S. Last year this had grown to \$52bn. in the U.S. and \$48bn. in the rest of the world. By the end of this year the installed base is expected to be \$57bn. in the U.S. and about \$54bn. in

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It is not obvious, however, that the cheapening of computer power and its extension into smaller and smaller pieces of equipment will lessen the need for large machines. In the first place, lower prices are expected to bring a rapid growth of computing to new applications. Secondly, the increasing numbers of intelligent terminals, small business systems and process controllers will themselves throw up more and more data which are available to be analysed by more sophisticated machines. Large central machines will be needed to control the expanding network of federal processors and to sort out the significant statistics from the mass of data that they will be sending back to the centre. The increase in computing will therefore itself create the need for yet more computing.

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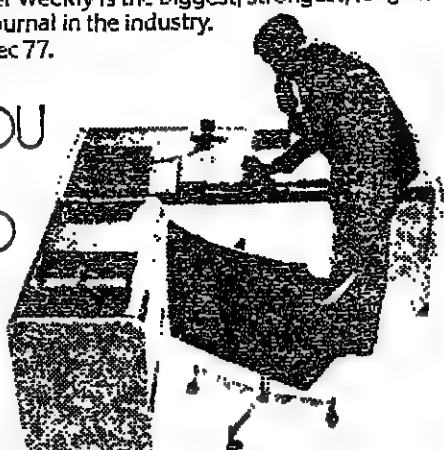
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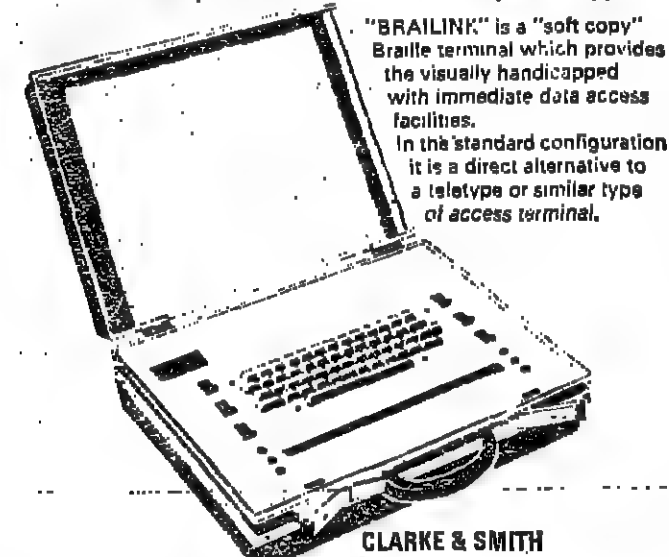


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THE COMPUTER INDUSTRY IV

Security and privacy

THE VAST and increasing stores of data which now cover almost every aspect of personal and business life can be the subject of a whole series of abuses and accidents which are becoming a matter of public concern.

Efforts to protect data fall roughly into two related categories: those concerned with Privacy and those of Security. The hazards range from accidental loss or damage to computer files in the improper manipulation or use of data for criminal gain or undesirable social purposes.

The issues of privacy and security are to some extent overlapping. For example, stolen files from a banking system could be used by a mail order or credit house to pry into personal finances of clients. On the reverse side of this coin, police may wish to use computer data for crime prevention in a way which some people would consider infringes personal liberty.

The issue of privacy has been the more widely aired because it concerns the general public; and abuses in this area are a more obvious direct threat to democratic liberties.

Criminal

The scale of the problem can be grasped from the fact that the Government now runs more than 200 different computer data banks, and the average citizen appears on about 30 of them. The records range from income-tax and National Insurance particulars, driving licence and health details, to the criminal records held by the police.

In most of these cases little objection can be made to the substitution of magnetic disc storage for mountains of paper files. The danger arises from the possibilities of cross-referencing the files and the rapid access which computers make possible.

Unless safeguards are built into the systems, it could become possible for a local policeman or tax inspector to obtain a complete print-out of an indi-

vidual's personal and financial history. The possibilities for bureaucratic abuse could then be endless. Even blackmail could result if petty officials were to discover unsavoury details of a citizen's financial, medical or matrimonial history. Is it desirable, for example, that a person stopped for a traffic offence could find his whole personal history is called up on to a portable terminal in the police car? Such a development is not only technically feasible, it may even be considered likely.

The dangers have often been compared with George Orwell's 1984, and it is a comparison which is by no means too far fetched. There can be little doubt that computers are already used for repressive purposes in the Soviet bloc. However, it is probably true that the safeguards against this type of wholesale abuse must lie in constitutional stability rather than in an elaborate series of rules of computing procedures.

A greater danger in the West is probably the "well meaning" abuse of data banks by bureaucrats. For almost any infringement of liberty can, in a particular instance, be justified in the name of efficiency. Take, for example, the example of a town planning department which wanted to draw up a profile of the residents in different areas. Information from the social services, rating and education departments might all be collated from different data banks, with perhaps indexes of deprivation and estimates of income. The computer might then be asked to calculate on various criteria which houses need to be knocked down.

The computer might even be asked to print out details of individual residents in a certain block due for demolition. The danger of this is partly that what ought to be essentially human judgments can be given a spurious objectivity. An index of deprivation may look like a scientific quantity, but it really depends on the fallible judgment of a social worker

who originally collected the statistics. The resident being judged has no means of challenging the judgment because he does not know he is being judged. Even when the final decision to demolish his house or street has been made, it may be impossible for a resident to disentangle reasons based on digits stored in some remote, mysterious, spinning disc.

There are therefore strong grounds for insisting that personal data stored on computers should be restricted to a limited definable use and not transferred to other files without very strict safeguards.

Scrutiny

This point was recognised explicitly in the 1975 White Paper on Computers and Privacy which said: "The time has come when those who use computers to handle personal information, however responsible they are, can no longer remain the sole judges of whether their own systems adequately safeguard privacy. The safeguards must become subject to independent scrutiny."

A code of standards has been suggested which basically tries to ensure that only relevant and accurate information is encoded, that individuals have a means of discovering what is filed about them, and that data bases are used only for specified purposes and only available to specified interests.

The fundamental point which is still not adequately realised by many who use computer data is that computer memories lack a very important quality built into the human memory—forgetfulness.

Forgetfulness is an essential part of the common sense which most people apply to their memories. For example, if a man fell into debt ten years ago, his creditors will forget the fact if he becomes reformed subsequently into a regular payer. A computer will not forget, unless specifically told to do so. As a result a minor slip

up or infringement can dog its perpetrator through the years long after it has become irrelevant. Those who obtain a print-out of a person's history may have no means of judging the significance of each entry.

These aspects of privacy merge with security when the possibilities of unauthorised access to computer files is considered. A study by the Stanford Research Institute of California, indicates that the most common abuses happen during the manual handling of tapes or discs.

A variety of security measures is commonly used to prevent the wrong people getting into the computer room or removing files. Special passes, keywords, codes and the physical presence of security men are all used. However, the growing move towards distributed processing and remote terminals means that physical security measures are not always adequate. Safeguards must be included in the programs themselves to ensure that only authorised people can gain access to data. It is relatively easy to arrange codes which will defeat a non-skilled operator.

The problem of outwitting a criminal programmer is much harder, however. And attention has recently been turned to providing operating systems which prevent programmers gaining access to data or to programs unless they are specifically authorised to do so.

On the other hand all security measures, particularly those which are integral with software, inevitably have a cost penalty. Some security measures which have been proposed would enormously increase costs (and inconvenience) in large data processing installations.

Future discussion therefore needs to strike a realistic balance between what may in theory be desirable and what companies and Government centres can be expected to afford.

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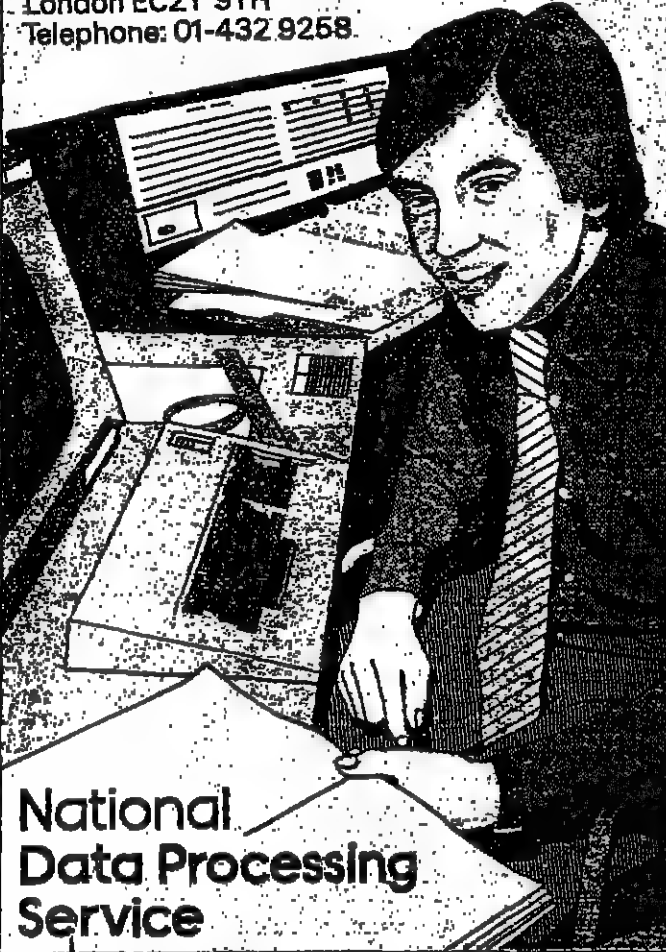
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Power of the micro

THAT THE equivalent of a \$100,000 computer of ten years ago has been reduced to about the size of a capital Q on this page at a cost of \$10 to \$20 is wonderful enough. The prospect that the same process will be repeated in the next decade is almost frightening.

Micro-computers a few millimetres square already exist with the capability of controlling an installation worth some £250,000. As the price continues to fall and performance increases, such microprocessors will find their way into more and more applications, often replacing the traditional mini-computer.

Although microprocessors have been available since 1973 when Intel marketed the first production chip, it is only in the last 18 months that a complete "computer on a thumbnail" including a relatively long "word" length and memory store has become available. Although the most sophisticated microprocessors are relatively expensive, the simpler versions suitable for process control or small business and domestic machines are falling in price to only £1 or so.

Yet in spite of the falling prices and the rapid growth of microprocessors, many people have failed to realise the enormous implications for society and industry. It is indeed arguable that the invention of the microprocessor and the associated integrated circuit technology will prove to have been as important as the development of the steam engine.

It will bring the power of digital computers to bear on almost every part of life. They will be found controlling a huge range of machines and applications. They will make many traditional industrial practices obsolete, and because of the large increase in automation that will become possible, they will cause a major upheaval of the labour market.

Some of the more enthusiastic predictions about the effects of microprocessors sound like science fiction, but the capabilities of this device are potentially so great that they are limited only by the imagination of engineers.

In one crucial respect, microprocessors and other miniature circuits are unlike almost all

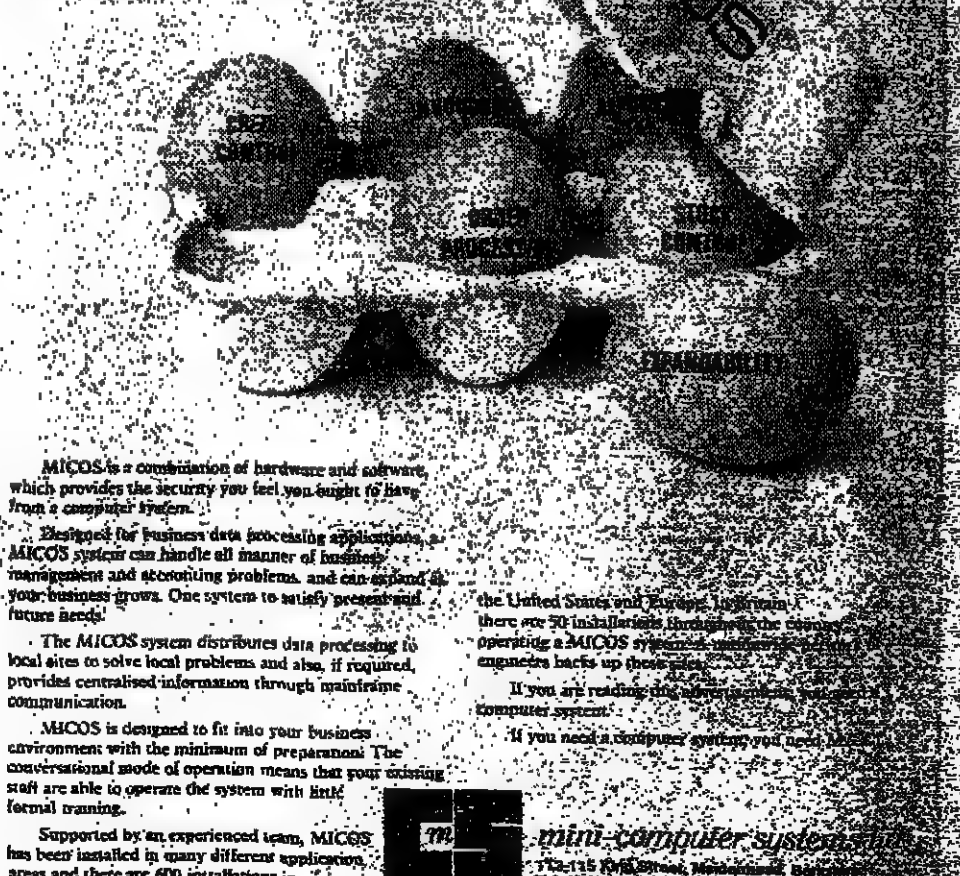
previous technological developments. That is, within limits, the price is independent of their complexity but is governed largely by the volume of production.

This is because integrated circuit production is highly automated and the basic raw material—wafers of silicon—is cheap.

The microprocessor is made from a very large-scale drawing incorporating thousands of transistors and other circuit elements with their interconnections. This drawing is photographed and then reduced to a few square millimetres. The photographic image is used to etch the circuit design on to a thin wafer of silicon. The silicon is then bombarded with impurities in an oven in such a way that the impurities fuse into the silicon and form a pattern of transistors exactly corresponding to the original circuit diagram. The process is repeated with several masks and different impurities until all the different parts of the circuit, including the connections are implanted on the wafer. Because of the very small size of each circuit

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Even in the heart of the very largest mainframe computers, the micro is beginning to have a place, in some applications like weather forecasting, it may be advantageous to distribute processors throughout the data stores. These processors would all act in parallel, performing the same operation on different parts of the data. Such "Parallel processors," still in the experimental stage, represent a radical departure from the present computers, which operate on the data in a sequential or "serial" fashion. In principle, at least, parallel processors, using very large numbers of micros offer the possibility of enormously increased computing power in many applications.

In a whole range of industries, therefore, the power of the micro is as yet only dimly understood, but everywhere manufacturers will ignore it at their peril.

M.W.

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THE COMPUTER INDUSTRY VI

Printouts on the decline

BIG COMPUTERS are still very expensive — a fact often overlooked by those who are now thinking on cue. "But of course, you can now buy a computer for a few hundred pounds which can do the same work as a room full of valves costing millions of pounds a decade ago."

Not only are big computers expensive, they are much more powerful than the old big computers, and they usually have to do more work. The operating systems of today's computers allow you to sit down comfortably at an interactive terminal and treat the whole computer as if it were your own.

Paradoxically, they still line up their information at a line printer, and dump it out, 1,200 lines each second. Even worse, when you find somebody with a smaller computer, you find that he has adapted his whole way of thinking — to the point of having it line up its information and dump it to a daisy printer, 300 lines each second. And the final absurdity is to find a man sitting beside one of these microcomputers which you can get for a few hundred pounds, and watching it line up its data and output onto a piece of paper at one character each tenth of a second. The problem is the paper.

I like to quote a former instructor on system design at ICL, who fought a despairing battle against the line printer. He would ask his students: "What are the essential functions served by paper in the output of a computer room — apart from the obvious essential functions of the staff during the process of digestion?" — and he found that as the group worked its way through the various applications, they found more and more data that needed to be held in the computer, rather than on paper.

Application

The only application where they felt paper output was essential was the payroll. Almost without exception, they felt that for the machine to merely transfer funds to their bank would not be satisfactory, and even if it were, they didn't like the idea of anybody being able to interrogate a video terminal for their salary data.

Our human desire for something tangible in the hand is not the only factor preserving the huge wad of print-out, but a great many apparent objections to doing away with paper archives are just rationalisations of this desire — and the security question is certainly one of these.

For example, when Honeywell invited a few guests to the opening of its super-centre in Amstelveen, near Amsterdam last year — the super-centre being a concentration of computer power within the General Electric Mark III network — it was made clear that this was the only day that anybody other than operating staff would be allowed inside the building, so stringent was security. Even a U.S. Congressman who had offered considerable business if he could personally check out the security arrangements was told that he and his business would have to stay outside.

And the security arrangements were almost frightening: not only the passwords and the need for absolute positive identification before staff could get in, not only the multitude of closed circuit TV apparatus, not only the bulletproof windows and the single door entry to the building, but also features such as all tapes being duplicated in another secure building miles away with interconnecting locks. And, said the centre staff, there were two full-time security dodgers — consultants who spent their time trying to find a way of accessing files on somebody else's program, to detect loopholes.



The Honeywell page printing system with an operator inserting a printing cylinder.

My suggestion for breaking security was to tap the telephone connection between the client and the computer centre and record all data traffic, thus getting the password and all the data.

"Well yes," said a senior executive, "we can't guarantee security outside our own premises, and that would work quite well. But we have found that many times, people who insist on the fullest security protection, passwords, daily changing codes and so on, will subsequently run their program, ask for a print-out of results at their local terminal, and then go home leaving the paper on the top of their desk for the cleaner to see."

The most damning thing about printout is that it largely negates the power of the modern computer — to access any item of data in milliseconds. A typical job printout — apart from payroll which we will always have with us — produces its biggest headaches in the head of the man who wants other people to read it. All too often, they can't be bothered.

"We've produced a fantastic spare parts stock control system," a motor dealer explains, "which not only shows us immediately when any parts are below a comfortable warehouse level, but can show us the number of times this happens in a quarter — so then we can arrange a higher warehouse level, if the part is ordered in often, or lower, if too seldom."

Unfortunately, this information was included in a print-out the size of the average family Bible — and he was just coming round to the realisation that, after six months of futile shouting at subordinates, he really needed a computer to do the job of reading through the results.

The amount of data was trivial by disc storage standards, and in his case, the only factor preventing his having all the information available to whoever needed it just by going to a terminal, was the fact that he'd invested more in a printer than he was prepared to see scrapped. Even more significant in terms of resistance to change, say the printer makers, is the cost of the paper. Not the raw material, but the design of the forms.

A printer-minded world is currently putting pressure on its suppliers to bring the costs of making marks on paper, in line with the drop in the costs of computing — and this cannot be done, because mechanical engineering is an advanced art capable of small improvement compared with the quantum jumps made each year in electronics technology. To justify the vast research and development costs of even a simple mechanical printer requires guaranteed sales of several millions of pounds.

Unfortunately, the methods of bringing the selling costs down — apart from the fact that they require sales of a great many more units to recoup the same

profit — seem to be tied to using non-standard stationery.

For example, U.S. aerospace conglomerate SCI Systems, hit upon the revolutionary idea of printing on paper which was bent into a tube — like printing on the inside of a toilet roll — so that the print head could be kept in constant motion, rather than reciprocating from left to right and shaking itself to bits. A device was developed which produced 2,200 characters per second. Unfortunately, it uses electro-arc matrix needles to form the characters on special (cheap, but special) silvered paper, not standard stationery.

Dataproducts, possibly the largest maker of line printers, claims that the multi-million dollar market for printers is outweighed by a factor of four by the stationery market. If the world could persuade itself to have very fast, cheap printers like this rotary device, it could then do all its work in front of the computer using a video display, until it found the item it was looking for — a part number, an address, a letter to the Editor, or a phone number — and then print that out in two seconds.

Microfilm

The other area which eats into the kingdom of the big printer is microfilm. Computers are quite capable of printing directly onto microfilm, and with a little encouragement, of keeping tabs on the information produced.

It is not clear whether keeping this vast archive of filing cabinet stuffing in miniaturised form will remain cheaper than keeping it in electronic form. Holographics, low-cost semiconductor memories, permanent magnetic bubble storage, are all heading for an intrinsically lower cost than photographic methods of recording text.

Perhaps the sign of the times is at the other end of the com-

puter process — input. The development of low-current, low-power electronics, using the semiconductor process known as CMOS (Complementary metal-oxide silicon) has produced several data recorders which seek to replace the note-pad. A device the size of a pocket calculator can be built to record several thousand characters, say for supermarket stock-taking, and then transmit them down a telephone line to a central computer, checking for errors on the way.

It would be too easy to assume that with cheap computers, the big printer would fade out, but the evidence is that it will not. It will cease to be the prime method of retrieving data out of a computer.

But at the same time, that quick look round the office will show several things which a big printer just has to do, with the only proviso, that a gradual improvement in the quality of the print is called for.

Documents which need to be carried will have to be printed — the driving licence is a prime example. Information held in other people's computers will have to be printed out for us, because whatever happens to technology, a permanent phone link, available at the drop of a hat, to Germany, will cost more than an occasional print-out.

And the "window on the computer" is a device with its own very special disadvantages; unlike a piece of paper, it can turn itself off, it flickers, it is said to cause eyestrain, it might even produce radiation hazards.

But it, or a new technology version of the video screen, will win. After all, motor cars have caught on quite remarkably, despite being expensive, needing driving tuition, costing a lot in maintenance, and being dangerous as well as emitting poisonous gas — because they are convenient.

Guy Kewney



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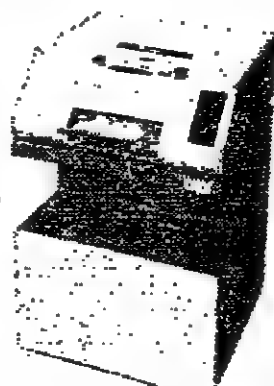
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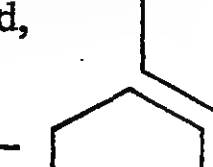
A detailed black and white illustration of a bumblebee, shown from a side profile. The bee has a fuzzy, segmented body with alternating dark and light bands. Its wings are spread, showing intricate vein patterns. The legs are thick and jointed. The background is plain white.

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THE COMPUTER INDUSTRY VIII

Government hand on software

THE GOVERNMENT'S decision in the autumn of 1976 to set up a company to market British software abroad was the result of some very anxious discussions about the U.K.'s weakness over large areas of the data processing market.

The establishment of International Computers Limited (ICL) and the development of its new range of machines with Government assistance may have diverted Government attention from what was happening in other parts of data processing. Small business machines, mini-computers, and later microprocessors started to be imported in large volume. British manufacturers had failed to get much of a stake in these large and growing markets, and by the time the alarm was raised, it was generally considered too late to make a counter thrust against American dominance.

On the other hand, the rapidly developing integrated circuit industry was causing a sharp fall in hardware prices. This fall seems set to continue for at least the next ten years, as production of components becomes more automated and more and more elements are fitted on to a single chip.

On the other hand the cost of programming is becoming relatively more and more expensive. In spite of some advances in technique it is highly labour intensive, and will remain so. Moreover, as computers become at the same time more powerful and cheaper, increasing pressure is put on the programmers to devise adequate operating systems and to develop software for the new applications which are being opened up for data processing. The development of the microprocessor has also thrown up a whole new range of programming problems.

Already the cost of software is approaching half the cost of hardware in many applications. And software happens to be an area in which British expertise is strong, and compared with the U.S. cheap. Taking an average for the whole of the data processing revenues, software now accounts for about a third.

It was against this background that the National Enterprise Board started to take an interest in the software industry as, so

to speak, a counterbalance to the Government's support for ICL. Already the French, German and Japanese governments had given substantial support to their software industries, but in the U.K. in 1976 there had been no intervention at all except for the support for ICL.

In the U.K. there were some 300 companies, most of them fairly small, producing software packages, maintaining programs and in some cases marketing equipment on a turnkey basis. The industry was in a flourishing state, largely because of the upward trend of the data processing market.

The NEB believed, however, that there was a danger that the industry as a whole would not take advantage of the opportunities for development in the world at large. It saw that the smallness of many of the software houses prevented them from investing heavily in fundamental research or the long-term development of software packages to be sold as products.

The NEB believed, moreover, that investment on a longer term basis was becoming more necessary because of the move towards standard software packages as a replacement for custom-designed applications programs. The very high cost of software means that there is a great advantage in producing standard programs whose development cost can be shared between a large number of buyers.

Difficulty

On the other hand software products of this sort need to be sold in as wide a market as possible, and like any other product they require investment capital.

The main difficulty faced by the U.K. software houses is that data processing in the U.K. represents only about 3 per cent. of the world market whereas in the U.S. represents about 55 per cent.

At the beginning of 1971, therefore, it was agreed to set up a subsidiary of the NEB to market British software overseas, mainly in the U.S. and to help to stimulate the development of software products suitable for sale abroad. By the end of last year, the new company, INSAC, was formed with a maximum of £9m. of equity

capital—perhaps to be increased to £20m.—envisaged during its first five years.

INSAC has now established itself in an office in Lincoln's Inn Fields and has opened an office in New York. It has also signed agreements with four of the leading software houses which have become associates. INSAC is hoping to sign up another four to start the first phase of its operations.

From the first it was decided that the software houses which agreed to co-operate should maintain their independence. Mr. John Pearce, INSAC's managing director, explained: "This is an entrepreneurial business. The real entrepreneurs want to control their own companies. If the NEB had bought them up, the chances are some of the best people would leave." On the other hand, the NEB was anxious that it should have some stake in the associates for commercial reasons and it has negotiated to buy between 26 and 30 per cent of the equity of the four houses so far in the fold.

Mr. Pearce explained: "We are expecting to put some fairly substantial contracts out to the associated companies, perhaps in the region of £500,000 to £1m. It was therefore thought desirable that the NEB should have a stake in the companies. Otherwise, it might happen that one of the houses could be bought by, say, Fujitsu a month or two after we had given it a contract."

In return for selling part of the equity to the NEB, the four companies, Computer Analysts and Programmers (ICAP), Sysime, SPL (Systems Programming Limited) and SDL Systems Designers Limited each have a representative on the INSAC board. The four companies are now submitting proposals to INSAC for the development of systems for which they see a future market. When INSAC has decided on the products it wants to sponsor, it plans to put the contracts out to competitive tender among its associates.

Because of the time needed to develop and sell software products, INSAC is not expecting to make profits until its third or fourth year of operation. For the rest of this year, it will be occupied in negotiations with other British software houses and in the setting

up of development contracts, an expanding market. It is evident that an increasing proportion of the added value of systems will be in the software. So there has been a general move into software, partly by acquisition. Several large international companies, including Fujitsu of Japan, have been looking at the larger U.K. software houses with a view to possible purchase.

INSAC has agreed not to sell its products in the U.K., so it will produce, it hopes, a substantial increase in business for the British software industry. Nevertheless, its formation can to some extent be seen as a defensive measure.

In the U.S. hardware manufacturers are already beginning to see the implications of continually falling prices even in

Sensitive

Even though INSAC concentrates on marketing British skills from companies in U.K.

The telecommunications race

THE MARRIAGE of telecommunications with the computer, a union which still has to be fully consummated in a number of advanced industrial countries (including the U.K.) has been a massive landmark in the recent history of telecommunications development.

Its introduction in the 1960s has meant that the telecommunications authorities and the telecommunications industries of most advanced countries have undergone far-reaching structural changes. However, a feature of the changeover from the various varieties of electro-mechanical systems to computer-controlled systems has been the longevity and reliability of the former; which means, in practical terms, that they will be around for many years yet.

Besides this, the telecommunications authorities, which are overwhelmingly public bodies, tend to dominate the research and development procedures of their domestic suppliers. Thus they can effectively insist that these suppliers continue to pro-

vide electro-mechanical equipment, even though the suppliers may be itching to give over their entire capacity to the computer-controlled systems. For example, the IIT subsidiary of Bell (Holland) which manufactures the Metaco 100 computer-controlled exchange, must also manufacture two electro-mechanical systems, the step-by-step or Strowger system, and the crossbar system, because of the requirements of the Dutch PTT.

Lucrative

With that major caveat, then, the computer-controlled exchange has arrived, and is beginning to dominate in the lucrative markets opening up in developing countries—especially the wealthier ones—which are now seeking to extend, often rapidly, their telecommunications network. Recently, the Post Office chairman, Sir William Barlow, estimated that the richest pickings in the export market would be found in the 1980s—when the Post Office hopes to have its fully-electronic exchange, "System X," on the market.

First, though, what exactly is a computer-controlled ex-

change? In one sense, the question is a little difficult to answer, because manufacturers describe their products as "computer-controlled" when these products are often very different. Further, computer-controlled has been an incremental, rather than a sudden, development.

Electromechanical exchanges evolved from distributed control, as in the Strowger system, to central or common control over a long period: the arrival of electronic processors hastened and completed the trend. As Professor J. E. Flood of the Department of Electrical Engineering at Birmingham University put it in a recent paper, "As a result of developments in computer technology a single electronic central processor unit can now control a complete exchange. The use of stored-programme control (SPC) for this processor results in great flexibility both in the allocation of line terminations and the provision of facilities including facilities for subscribers and for the administration (for example fault diagnosis and network management)."

Stored programme control, the latest thing in computer-controlled exchanges, are now being progressively phased in

in a number of countries. The SPC "principle" allows the design of a highly modular system, which reduces the need to follow a strict functional "hierarchy" of exchanges. Operational, maintenance and administrative procedures can be standardised for the network as a whole, without regard for the functions of individual exchanges.

Software becomes extremely important in the design and maintenance of SPC systems. Changes in the size of functions of any given network are mirrored in the programmes for the exchange, as well as the hardware itself. The added complexity of introducing SPC is that it must be made compatible with existing electro-mechanical hardware.

Advanced

The variety of extra facilities which these advanced systems now offer include abbreviated dialling, call transfer and information services not previously available.

The countries currently leading the SPC "race" are America—with IIT and Western Electric both offering systems. These exchanges, first develop-

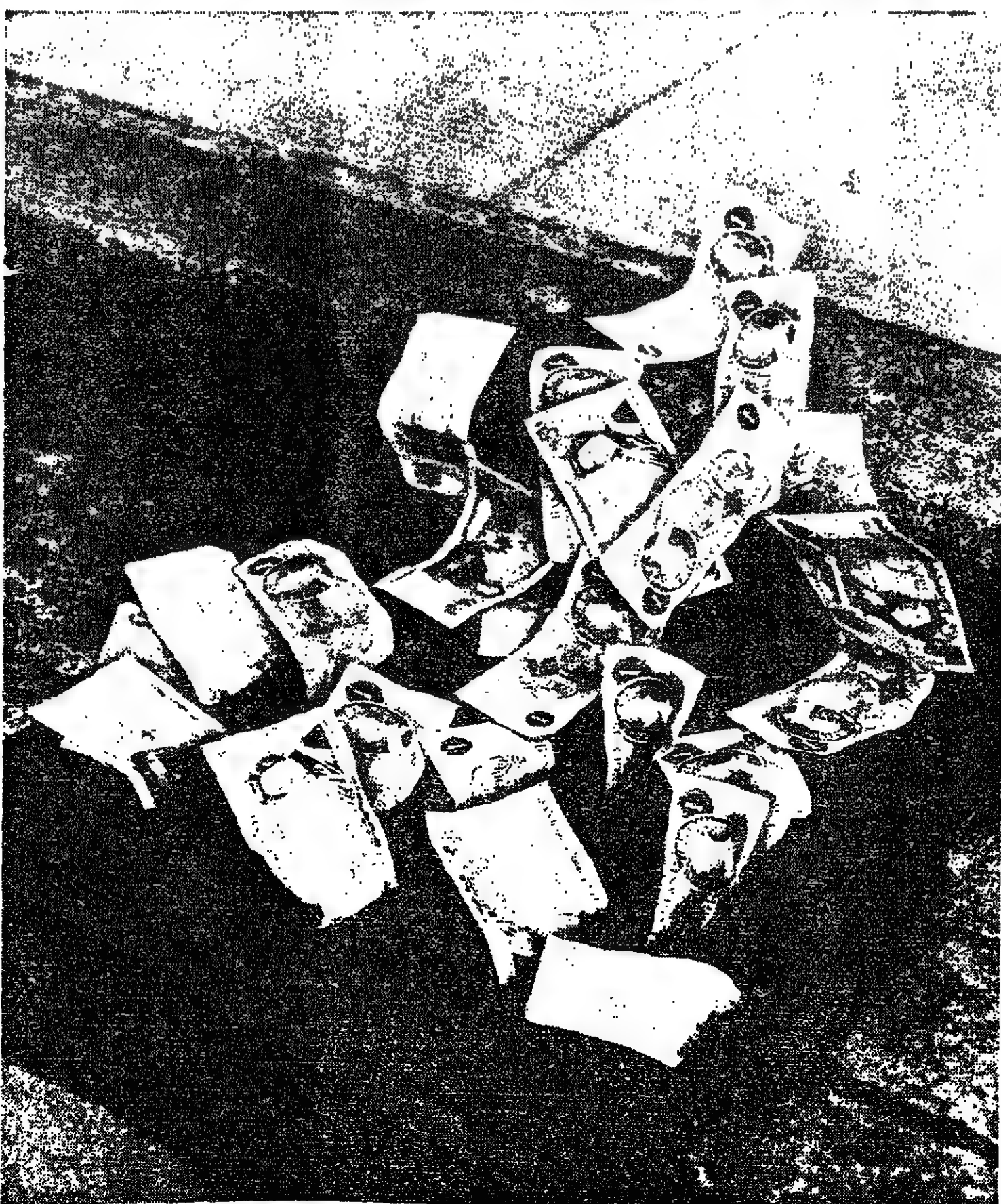
known in the U.S. and to build up a portfolio of products which it can sell.

There is little question of the U.K. lagging in the race. The most advanced system manufactured in Britain—d TXE4—is, by most definitions, not fully electronic, though, it is judged as all but a development of the full electronic exchange—System X—is now going on ahead, but will not be into service in Britain, before—at the most optimistic estimates—1982, it will only be able to enter export battle after that.

System X is the generic name for the "family" of advanced switching and associated systems which will progressively replace the Strowger exchange. These exchanges, first develop-

CONTINUED ON NEXT PAGE

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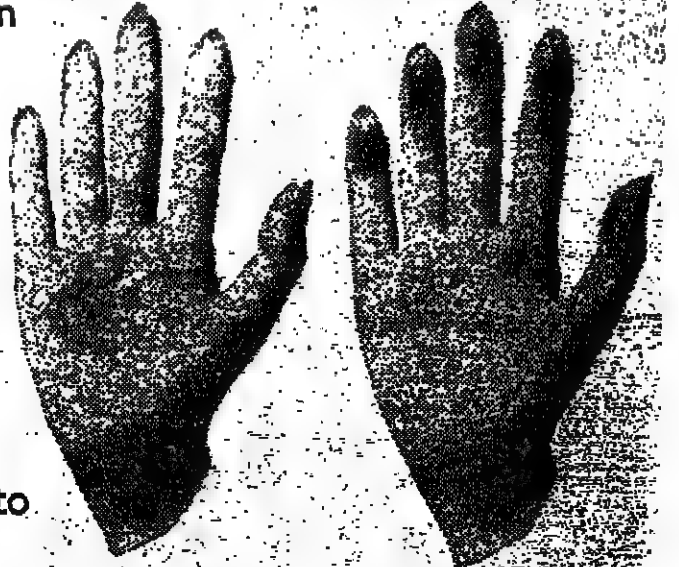
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THE COMPUTER INDUSTRY IX

Thriving services sector

OVER the computer services industry is expected to reach £300m. this year, according to reliable predictions for 1980 suggest that by then sales should be

istry has come a long way since the days of the 1960s. Maurice Kendall, then of B.P. subsidiary Computer Services, said seriously that the of the enterprise was the most interesting he lads at the least shareholders.

"the lads" pulled putting services coup by winning a £24m. r the design, supply, ation of a complete r radio communication for a Middle verment.

he work carried out vices industry is on but as the National Development Council iter sector working l in a report issued ming of this month, y is "thriving."

are now such an im- t of the computer it the working party "concerned that the t of the services ld complement and the development of aturing." has also had some o say about comput-

ing services, even if it has been slow to invest in them.

A report on Investment in Computer Services, issued late last year by stockbrokers Greene and Co. said that: "Despite the difficulties experienced in industry at large, and the services industries in particular... the computer services industry remained buoyant with one of the fastest growth rates of any industrial activity."

"This growth might have been faster were it not for the severe shortage of skilled staff, which received much attention in the working party report. The glowing health of computing services is also a little surprising at first sight, in view of the onslaught of rapidly developing electronic technology."

The brunt of the attack has been borne by the computer services "bureaux," which were founded in the mid-1960s on the principle: buy a large and very expensive mainframe computer, and sell batch processing services — like a payroll — to companies who cannot afford a machine of their own.

Systems

But since then, minicomputer and microcomputer systems have been developed which can provide computer power at dramatically less cost, and do not need special rooms and a large operations staff. Now, nearly all businesses — whatever their size — could probably afford to buy a computer system of their own.

In the past two years particularly, the bureaux have woken up to this threat to their revenue, and their newly developed activities seem to have served them well, for they report that last year's business was much better than they had expected.

The main change undergone by the bureaux is that their new range of services make them look more like software houses — and software has never been more expensive than now. The services sector generally is selling expertise, and there is more expertise in selling software services, than hiring out computer time.

The bureaux are now selling software packages and they have set up in competition with minicomputer vendors and software house suppliers of mini-computer systems by selling them themselves. These turnkey systems are complete hardware and software packages tailored to perform specific applications, from office order processing, to Seicon's Middle Eastern communications system. Others have acknowledged the cheapness of modern computing by devolving power to their customers.

One of the most ambitious schemes of this kind was launched last year by Baric Computer Services, under the name Datacare. Users of the service are supplied with intelligent terminals at their own premises and can carry out some local

processing, but use the Baric mainframe for big jobs.

Baric is jointly owned by Barclays Bank, which will provide customers with finance for the service, and ICL which makes the terminals. Baric writes all the software, and claims to be attracting not only existing bureau customers, but also completely new bureau users who had been considering the purchase of their computer systems.

The bigger bureaux with the most advanced hardware have been making more of a point of the long-established practice of selling time on their machines to prospective in-house users of similar equipment. They now offer a full range of pre-delivery services, from staff training to software support.

The ICL-based bureau Computel has gone in for this in a big way by exploiting the gap between ICL's 2900 New Range computers and the old 1900 range. However, except for the ventures into turnkey systems, these activities are only modifications of existing services.

The most notable new service to be offered by bureaux in recent years, is timesharing, dominated by U.S. companies. The difference between timesharing and batch operation is that users of a timesharing service are given immediate access to the computer, through a terminal, without the delay of his job having to be submitted to the computer run as part of a batch, and then eventually returned to him.

Timesharing opens up new possibilities, and the bureaux which offer it are fond of referring to it as a management tool which will give users the information they want, when they want it, and not have to wait for a month-end report.

The classic timesharing application is financial planning.

because the user can ask the computer, "What if...?", and be told almost instantaneously.

Nearly all of the customers of timesharing services have in-house computing facilities of their own, but these are not geared to provide a timesharing service because they are too heavily committed to production work.

But for the software houses, changes have been less noticeable. The production of software is much the same as it has always been highly labour-intensive.

Indeed, the writing of software has more in common with the way monks in the Middle Ages laboured over the production of one-off Bibles than the Information Age of the late twentieth century.

Although there will always be a market for custom-written software, it is becoming more common for companies to specialise in the production of a limited number of software products, which for example make computer systems run more efficiently, or act as telecommunications monitors, which ease the path of the computer user into the increasingly fashionable world of teleprocessing.

Philosophy

Whatever the speciality is, the philosophy is the same: find a requirement in the marketplace, design the product, develop it, sell it, and maintain it. If it is the right product, the same package can be sold 200 times, with very little modification.

Peterborough Data Processing is a software house which built up its business over 10 years by selling what is probably the world's most unglamorous software — a payroll package. It now claims to be the largest supplier of such packages in Europe, with about 300 installed. More

recently it has tripled its product range, and now offers a personnel management system, and a pensions package.

The rapid rise of the micro-computer has not gone unnoticed by the software houses — the thousands of micro-computers which are supposed to flood the homes and offices of the future will all need to have programs in them.

One of the biggest ventures into microcomputer software has been by Britain's largest software group, Computer Analysts and Programmers (CAP U.K.), which in 1975 set up CAP Microsoft, a subsidiary dedicated to specialisation in microcomputer software and consultancy work.

This was the first such operation in Europe, and it was followed by the announcement last year of a revolutionary new minicomputer-based system which speeds up and simplifies the production of micro-computer software. It was far ahead of anything similar, even in the U.S., which dominates microcomputer developments.

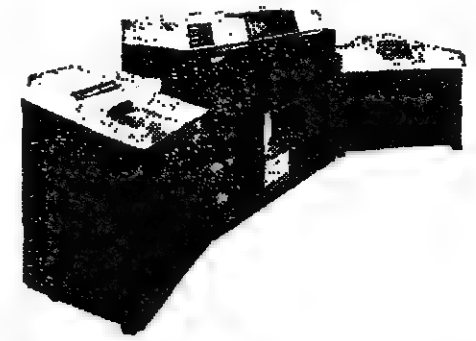
Not all software houses are as large as CAP, but in the future they will be able to afford to stay medium-sized, unlike the bureaux. It is generally expected that in five years there will only be big ones and small ones.

Today's medium sized bureau will have to merge to be able to afford the new hardware and software that will be necessary to keep up with increasingly sophisticated demands of their customers. Those that get away with staying small will be specialists, aiming at particular industries, like insurance or the motor trade, or like the small minicomputer-based timesharing services which are springing up to challenge the might of the U.S. giants.

Roger Green

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century, still serve of all telephone con- the U.K., and do so. Indeed, their very coupled with the igh standards on Post Office insists ng from their sup- been the major e delay in the intro- e electronic system. een the Post Office e big suppliers of quipment—Plessey, C—began in 1972, s the largest ever in U.K. telecom- and at a conserva- £100m. will have. Is clear that there is some new before production momentum behind the pro- fact that three

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Speed

The implications of these new systems, which are only beginning to take physical shape, are enormous. Besides the extra speed and the large number of new facilities, they also offer economies of size and of maintenance, and will facilitate the use of such communications media as Viewdata and higher speed Datel services. The "offices of the future," which are now on the drawing boards of the major communications industries, will be brought into the present: the division of labour within offices—for example, the precise breakdown of tasks between manager and secretary—will be dramatically changed (or could be, conservative work practices permitting). More ominously, they imply a dramatic reduction in labour on the telecommunications engineering side, a development of which the unions are not unaware. For the moment and the immediate future, growth in the network means that labour saving is compensated for: but that is not likely to be the case for much longer. The resultant problems of potential redundancies must sooner or later be tackled—a task, perhaps, for a future generation of computers.

John Lloyd

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THE COMPUTER INDUSTRY X

Robots ready to take over

ANYONE WHO has had to walk around the often dark satanic mills of industry will be able to think of many plants where a long-armed robot would make working conditions so much better for operatives, taking hot castings from their dies, placing sheet between the jaws of giant presses and so on. Car assembly lines, though strenuous, do not generally operate in the conditions of heat and noise that foundry workers and people in rolling and stamping mills take as a matter of course.

It is thus somewhat ironic that it will be in a brand-new purpose-built plant at Longbridge, being set up for the production of the new Leyland model, that the first large-scale use of robot welding equipment in Britain will take place.

Sealey Electric Welding Machines has the contract for the construction of two vast welding lines for the Longbridge plant and this company has ordered a total of 28 industrial robots from Unimation of Telford, Salop, to go into the welding complex which will cost some £7m. to set up and program.

Automated

The robots will include several long-reach units and a first batch will be delivered in time to be incorporated into the first of the body frame production lines when it nears completion late this year, making the new Longbridge centre the most highly automated factory in Britain.

Designers believe the plant will be a match for any European car plant and that it should allow the new Mini to be produced with far fewer rejects and to a far greater accuracy thanks to constant line checks and the precision with which line spot weld guns and the robots can be controlled.

These robots have a certain amount of intelligence which allows them to follow a sequence

of instructions which will take the welding guns they manipulate to the right spot on the vehicle body, or to inhibit the sequence if a tolerance checking station instructs them so to do.

Similar machines from Unimation will be incorporated in the Fiat production plant which is being designed around a new old concept of a work "cell" constituted by a trolley operating under computer control. This vehicle picks up car parts and presents them for spot welding to the robots which are equipped to sense what type of car is present and then "know" where the spot welds must go.

This Robogate system was initiated by Fiat's Comau machine-tool subsidiary working with Digifon of Switzerland.

It is expected to be at least as productive as the standard type of production line and far more easy to switch to variations on a basic car theme, since there will be no need to halt an expensive production line and carry out lengthy modifications. The control computer, the automatic guide lines and the robots only would require to be re-programmed in most cases.

Both at Longbridge and Milan, the robot welders are integral parts of the plant, reflecting the very considerable use of spot welding robots on production lines in Japan. However, some Japanese car plants are using robots for heavy-duty welds on those sections of the car underbody which require particular strength and stiffness.

In Sweden, both Saab and Volvo are using ASEA/ESAB robots for arc welding work, these robots being of a somewhat different type from the Unimation design. The ASEA unit uses a tiny computer (an Intel 8080 microcomputer) to memorise sequences of movement as well as prohibited manoeuvres.

It is taught what it is required to do by a human operator taking the full sequence of

movements it would be required to perform on site. Each one is recorded in the memory and the full sequence can then be repeated ad infinitum and to very close tolerances.

ASEA has demonstrated the use of heavy duty robots with ESAB gas shielded welding equipment performing particularly complex operations, and a number of users have started to apply such robots in Britain and Germany.

ASEA itself is making extensive use of its own machines, particularly where hot and/or dangerous, repetitive work has to be carried out and in some instances where the robots are made to operate round the clock. An example of such an application is in the positioning and unloading of stainless steel components on polishing equipment which uses a particular obnoxious powdery black buffing medium.

Subsidiary

Meanwhile, Unimation is spurring development work at a subsidiary it acquired nearly a year ago under the name of Vicarm. Now called Unimation West, this organisation has supplied computer-controlled and electrically driven robot arms somewhat similar to the ASEA type to MIT, Stanford Research Institute, and the U.S. National Bureau of Standards, among others, for research into automatic assembly, machine intelligence and so on.

Development is being pushed along the lines of improved sensors for the arms and better servos as well as more powerful software to make it easier to instruct the control computers in their tasks. Presumably the weight capacity of those units will also be increased.

The micro used in these devices is a DEC LSI-11 which can "talk" to PDP-11, Nova and Interdata machines. Options offered with the arms are force and touch sensing

fingers as well as wrist force sensors allowing the arms to be used with great sensitivity. Both types of arms have six degrees of freedom.

Meanwhile Unimation is planning to spring a surprise on the opposition at the Harrogate Welding Engineering Exhibition in May. It will take the shape of a robot carrying out continuous seam welds and having enough intelligence to move the welding torch in as many as five axes simultaneously.

The Unimation/WIRS system consists of the robot and the equipment. It controls—power supply, shielding gas supply and wire feed units. And like the ASEA units, the system can be taught to weld a different workpiece in a few minutes at most.

Productivity compared with manual operators is greatly enhanced. But a key point is the availability of the system for short production runs.

Thus the robots are not only beginning to handle the "dirty" dirty and noisy jobs. They also are beginning to penetrate into areas which hitherto have been the preserve of highly skilled operatives, in the name of productivity and cost reductions.

And beyond them is work in hand in Britain and the U.S. to develop automatic assembly machines able to recognise the orientation of a component, however complex, before picking it up, rotating it and placing it where required. Already machines have been developed which put together several simple units into one assembly at speeds up to eight times faster than the best a human operative can achieve and go on doing that round the clock until the machine is switched off.

Solution of the problems of insatiable industrial demand is creating does not lie with the automation experts, but with Government economists and social scientists.

E.S.



Part of Unimation's export order for Fiat, a Series 4000 Unimate being checked at the Telford factory.

Peripherals in the pipeline

AFTER SOFTWARE COSTS, a prime concern of computer users is what they have to pay to buy or lease peripherals. The main processor cost has dropped rapidly, particularly during 1977, following some drastic price reductions by market leaders in traditional and mini computing, which the rest of the field perceives has to match.

Much of the hardware now used has a very high precision mechanical content, demanding extreme skill of the workers on the respective assembly lines, and therefore almost incomprehensible so far as production costs go.

Some companies, such as BASF for instance, partly solve this problem by retaining a hold on the magnetic media technology—which indeed they pioneered many decades ago—but having the mechanical electronic side of their disc drive designs produced by Hitachi/Fujitsu for joint use.

But electronic component price cuts have relatively little effect on the cost of peripherals, warning that there must be and the processor/peripheral cost overlap between the two ratio is therefore likely to continue to change still further.

although at the moment and for the mid-range mini it is thought to be about 1:10. This for

reasons why a major maker such as Data General is making more and more of its own peripherals and, indeed, its own integrated circuits.

It should therefore be a concern of Government to have a flourishing indigenous peripherals industry.

However, despite recent improvements in the prospects of the handful of U.K. companies involved, total output is overwhelmed under the avalanche of imports.

Exactly what the figures are is very hard to determine from official statistics. But the trade balance on peripherals and the components of sub-assemblies for them could have been in the red by as much as £400m. in 1977, with little prospect for any improvement.

In minicomputers and small business machines alone, Pedder Associates (PAL) put the total installed value of equipment at not far off £500m. at the start of 1977, with the

effect on the cost of peripherals, warning that there must be and the processor/peripheral cost overlap between the two ratio is therefore likely to continue to change still further.

many machines were installed or what they were being used

Of this £500m., possibly £400m. represents peripherals, which comes from U.K. manu-

facture. But the salient point is that this market base is being added to at a rate of between 30 and 40 per cent. a year for an outgoing currency drain of over £100m. a year.

It is particularly difficult to make a similar assessment for general purpose machines until it becomes clear whether there were more being withdrawn in 1977 than new ones installed.

But here, Department of Industry statistics can give some guidance. Certainly the days of the sense of peripheral equipment are over since several companies offer main memory, two—and it is rumoured to come—offering processors. The plug-compatible gap has not got where it is by offering Chinese copies. Because their shorter product runs at lower overheads they have generally offered equipment which while identical to the equivalent so far as the processor is concerned, has advantages both in price and performance. And since the ranks include CDC, IIT, Bu-

ness Systems, Exxon and

new Systems, Exxon and Grotrian, they can exert much more influence than hitherto in the U.S. arena.

Exports

For 1977, looking at the separate figures for complete systems, peripherals and parts of peripherals imported, it looks as if the total was around £800m. against £420m. the year before.

Exports in 1977 appear to have reached a figure of about £280m., again taking into account the very large grey area

hidden under the word "other" in the official figures. This compared with £220m. in 1976.

Now the imports are not directly and strictly comparable with exports because 40 per cent. represents equipment for installation as part of a system before re-export, and there can be a lengthy dwell time in the U.K.

Allowing also that many intelligent terminals contain a stripped-down mini, there would still appear to be a yawning gap in the British computing trade which the efforts of Data and the CPI organisation set up between ICL, NCR and CDC cannot bridge. At about £400m. and negative going to the tune of, say, 35 per cent. a year this is absolutely unacceptable at a time when so much is talked about job creation. In deed, if BASF can market very successfully into the U.S. what is the problem?

It lies, of course, across the Atlantic, where the battle between IBM and the severe manufacturers which are seeking to erode the latter's big installed equipment base has been fighting on the sales pitch and in court.

But where ten years ago the plug-compatible manufacturers were very vulnerable to an threat that the IBM mainframe teams would not touch an IBM system, containing "foreign bodies," several companies, the growing strength and competence of the alternative suppliers and, especially, the seniority of users switched to them has changed the picture.

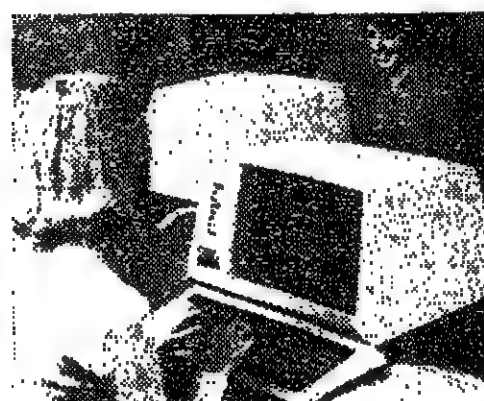
Now, it is believed, not a short of 40 per cent. of all IBM installations have one or more units from competitors. At the situation is changing very quickly, since there seems to be no limit on what the plug-compatible camp will offer. Certainly the days of the sense of peripheral equipment are over since several companies offer main memory, two—and it is rumoured to come—offering processors.

The plug-compatible gap has not got where it is by offering Chinese copies. Because their shorter product runs at lower overheads they have generally offered equipment which while identical to the equivalent so far as the processor is concerned, has advantages both in price and performance. And since the ranks include CDC, IIT, Bu-

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CONTINUED ON NEXT PAGE

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The case for rescuing the Think Tank

E CENTRAL Policy Review partly because its first head, Lord Rothschild, had the independence, status, and personality necessary to make it work. According to his book, *Medicine*, best friends in Whitehall used to ask themselves whether the Think Tank has a useful life. The answer must be that it would have, but that its survival probably depends upon the ingenuity of the new Prime Minister, Labour or Conservative, to give it new life.

Perhaps the best argument in its favour is its continued existence in the Cabinet's office, the office whose primary duty is to advise on the Government's overall strategy. In the White House staff, this is the President's Chief of Staff. In the British Government, this is the Prime Minister's Chief of Staff. The Think Tank is a small, select, and confidential group of advisers, who, in the past, have been able to provide a strong and cohesive board of directors.

In contemporary Britain, most departments are so busy that they are almost unmanageable. Ministers are very determined indeed to find the time to do their jobs, but they are often too busy to do so. The Think Tank is a small, select, and confidential group of advisers, who, in the past, have been able to provide a strong and cohesive board of directors. The Think Tank is a small, select, and confidential group of advisers, who, in the past, have been able to provide a strong and cohesive board of directors.

complementary to the CPSRS, since the former was political and served the Prime Minister only, while the latter was independent. We cannot know how this theory squared with day-to-day practice until we have the documents in, say, 30 years' time, but it does seem true that on a personal level the staffs and directors of the two units established good relations from the start.

Yet Dr. Donoghue had a number of inbuilt advantages not available to his opposite number, Lord Rothschild. He was independent, and he was in contact with the new Prime Minister. Dr. Donoghue had his office right inside Downing Street, giving him constant contact and daily conversation with Sir Harold. When Sir Kenneth Berrill took over the CPSRS soon after Labour came to power, the feeling that the Tank was something outside the Downing Street circle was magnified.

In different circumstances, and had he been a different man, Sir Kenneth might have tried to cultivate his proper constituency, the Cabinet as a whole, in an effort to make up for the weakening of the link with the Prime Minister. Here again, circumstances did not favour the CPSRS. Some Left-wing Labour Ministers noted that a few prominent young Conservatives (William Wedderburn, Adam Ridley) were working for the Tank, and drew the inference that its advice was not for them. As a result, Labour Ministers tend to prefer their own political advisers to the central policy review staff and anyway most of them have a fairly inflated opinion of their ability to man-



Changing Think Tank: Sir Kenneth Berrill (left), present Director General, and his predecessor, Lord Rothschild.

age without briefings from something called a Think Tank. When the papers did come forward, their effectiveness was on occasion diminished by the deep ideological divisions within the Labour Government. Long-term strategic thinking was not, after all, an outstanding feature of the Wilson administration.

The arrival at No. 10 of Mr. Callaghan might have changed this depressing picture, if the new Prime Minister had chosen to put his weight behind the

CPSRS. By all accounts he did not: he took more notice of their work than had Sir Harold Wilson, but not enough to restore the Tank's fortunes. And when a long-term strategic paper was presented to the Cabinet at Chequers in July, 1977 it was Dr. Donoghue's unit that did the work, not Sir Kenneth's.

As if this were not enough, the Tank has suffered from its own good intentions. True to the tradition of "open govern-

ment" so often urged on all official bodies it published a number of its papers—not by any means the majority of its work, but enough to create a stir. This is a battle it could not win. If it was to do its job of providing radical, possibly unpopular analyses that might upset vested interests—why, those vested interests would fight back. It avoided that risk, it faced the opposite risk of being derided for lack of courage or originality.

Its indication that Chrysler should not be rescued by the Government was published, and publicly ignored. Its paper on the future of the power plant industry suffered a similar fate. Those who noticed its workmanlike report on population and the social services, which suggested that since we shall have fewer people we may be able to spend less, offered mild cheers, but even though this message is now beginning to sink in it hardly counts as an overwhelming triumph. One might say of these papers that their quality is high, where they have not been effective the fault lies with the recipients.

The Review of Overseas Representation has been widely attacked on the ground of being a poorly-written and badly argued paper. I think that when the dust has settled it will be seen that large parts of it do not deserve such a charge. For the purpose of the present discussion, however, that is of no consequence—the hard fact is that the Review stirred up too many vested interests at once, with the result that the firing against it has not yet stopped.

Some of the Tank's achievements cannot be trumped: their

reports on energy conservation and race relations, for example, or their last-minute rescue of the FWR from the oblivion to which the recent policy statement on nuclear power might have consigned it.

An ex-Treasury man, Sir Kenneth would naturally put his own alternative views on the economy, as he has a right to do, when he sees that a particular paper going before the Cabinet or a particular committee is in the Tank's view erroneous. But there is no way for the public, or much of the Civil Service, to judge this hidden segment of the iceberg.

The upshot is that morale inside the CPSRS is hardly at its highest, while its stock within Whitehall is very low indeed. Some whisper that the young outsiders who work for the Tank have gone too far this time; others, in direct contradiction, that Sir Kenneth is too far under the influence of Sir John Hunt, the Secretary to the Cabinet. The young outsiders themselves are not quite so young any more.

One indication of why it would be right to rescue the CPSRS from its present depression is the current reaction in Whitehall. Those who rejoice in the idea of its possible demise, one gathers, are by and large the officials who long for a return to the days when there was no counterweight to departmental or interdepartmental briefs—when no body of people at least half of whom were not civil servants could take an overview different

from the rest of Whitehall. Those who are sad to see its present state of relative decline are the more outward-looking officials.

But how can it be rescued? Sir Kenneth said yesterday that he has no immediate plan to leave his post, and it would be unfair to place the entire blame on his shoulders when it is seen how much the circumstance of a particular Labour Government contributed to the Tank's misfortune. But a new start, with a new (freshly-elected?) Prime Minister and perhaps a new head for the CPSRS seems inevitable. The Tank cannot be at its best in the run up to an election anyway.

It would be a pity if the new man decided to publish less, although it would be understandable. Indeed he (she?) might decide that more publication was the better option in the long run. An effort to prove to Ministers as a body that the CPSRS was their collective servant would also be essential. The regular strategy reports should certainly be offered to the new Government. There should, perhaps, be more outsiders and fewer civil servants: it is to Ministers, Parliament, and eventually the public that a CPSRS with its own long-term future at stake should be looking. Yet the backing of the Prime Minister of the day, plus that of another senior Minister or two, would be a vital ingredient. The response of our next Prime Minister to this machinery-of-government problem will be an early indication of his or her sense of the importance of broad strategy.

Joe Rogaly

Letters to the Editor

new contract conditions

Mr. M. Milman.
Schedule 1 of the Unfair Terms Act 1977 sets out lines for the application of reasonableness test for contracts where one party is to avoid or limit his liability under a contract. The present now has a stated intention to impose, and to put other relevant conditions to impose, conditions on contractors regulating payments. It is said that such a condition would be penalties and the avoidance of obligations by the means of a condition. It would, therefore, be a condition to impose, and to put other relevant conditions to impose, conditions on contractors regulating payments. It is said that such a condition would be penalties and the avoidance of obligations by the means of a condition. It would, therefore, be a condition to impose, and to put other relevant conditions to impose, conditions on contractors regulating payments.

transport strategy

Mr. J. Miller.
"Left in mid-air by the 'to policy' was the clever of your aerospace correspondent's article of February mentioning on the Government White Paper on airport R. Bonwit, whose letter published on February 6, Mr. J. C. Rogers—the secretary of the Civil Aviation Authority—writing in the issue of February 8, make out a case for a tunnel and rail link to Heathrow, which of course should be enough to take European traffic to Heathrow. It could go further and say the cost of the tunnel and rail link will be as high as the cost of not doing it having it working within ten years—preferably we have this rail link to Heathrow. Europe, on for a new airport will be a success. Hektor Otto Monaco, pauté de Monaco.

capacity of airports

Can Gatwick's single runway handle 25m passengers? Robert Beveridge asks. Before we get into closing down one of the runways to test hypothesis perhaps it

would help to examine how the conclusion was reached.

We are not saying that Gatwick, with one runway, could handle 25m passengers with its current mix of aircraft because Heathrow, with about the same level of passenger traffic in 1977, certainly needs two runways. We are saying that, by the 1990s the average size of aircraft and their passenger loads will have increased to a level which will make this possible.

In 1977 Gatwick handled 6.5m passengers on 60,000 commercial aircraft movements, with an average load of 87 passengers per aircraft. This compared with an average load on Heathrow's aircraft of 106 passengers. The ultimate level of aircraft movements that can be handled on Gatwick's runway has been assessed in the Government's airport policy White Paper at 160,000 movements, that is, double the present amount. Therefore, on the basis of present passenger loads Gatwick could cope with about 25m passengers. So, to achieve 25m passengers, aircraft loads need to grow to a little less than double what they are at present, say, 165 passengers per aircraft. This growth does not seem to be unreasonable. It is given the sort of aircraft fleet that will be flying in the 1990s, for example, is already carrying about 280 passengers on average, while Boeing 747s at both Heathrow and Gatwick regularly carry well over 400. The Government in its 1975 consultation document "Airport Strategy for Great Britain" assumed a figure of 180 to 200 passengers per aircraft by 1990.

Of course, there will continue to be small aircraft carrying well under 100 passengers, but there seems no good reason why an average of 165 should not be achieved. After all, in 1962 the average load at Gatwick was only 40.

Baggage at Heathrow

From Mr. L. Gubbay.
Sir—The South African Airways flight from Johannesburg arrived promptly at Heathrow at 7.00 a.m. on February 13. Passengers were told that it would take British Airways about one hour to unload our luggage because of the cold weather. Some of us wondered whether two degrees of frost was unusual at seven o'clock on a February morning!

We waited patiently for over an hour and a half in the cold, draughty baggage hall, watching luggage flowing smoothly, for other airlines not dependent on the services of British Airways. Eventually questions were asked, and tempers rose. The common factor in the several conflicting explanations offered was that the single serviceable unloading machine, out of a fleet of 40 such vehicles, had just broken down and could not be repaired. British Airways' staff would strike if one of the other airlines was asked to assist. The airport would be brought to a standstill if passengers attempted to unload their own luggage. No British Airways manager could be persuaded to speak to the passengers. Junior members of the staff were variously apologetic, ineffective, or downright rude. Deadlock.

At five to nine I told British Airways that unless a manager

—or our luggage—appeared within the next 20 minutes, the passengers would walk out on to the tarmac and paralysed the airport. It may be a coincidence, but biscuits and hot coffee arrived at 9.15, and so did our luggage.

The inefficiency, complacency and sheer bad manners of the British Airways baggage handling unit must be experienced to be believed. I would like to think that there will be an inquiry as to why all 40 machines were not serviceable, and why no member of the management staff was sufficiently concerned to come downstairs and speak to the unfortunate passengers. I would like to believe that reprimands will be given where deserved, and that lessons will be learnt. Somehow, I doubt it. Lucien Gubbay.

Debt collection agencies

From the director of Consumer Credit Office of Fair Trading.
Sir—Mr. Watson, (February 17) said that the Office of Fair Trading has not yet refused an applicant a licence under the Consumer Credit Act.
The director general of fair trading has already issued a number of "minded to refuse" notices to applicants and many more will be issued over the next few months. Applicants have the right to make representations at this stage and to appeal against an adverse licensing decision. It is right that these safeguards should exist to ensure that the honest trader is not unjustly treated even if they may cause delay in routing out unlit traders.

In addition, there have been some applicants with improper or unfair trade practices who, when challenged, have given undertakings to the director general that they will discontinue these practices. They have been granted licences in the knowledge that should they breach these undertakings their licences will be revoked.

Firms and individuals had several years to put their houses in order before licensing arrived and the knowledge that licensing was coming has already had an effect in cleaning up the credit industry. We shall never know how many firms decided that they had little or no chance of being considered fit persons to be given licences. What we do know is that when we have asked some applicants for further information, we have discovered that they have recently closed their business down or have replied to the effect that they are going to do so.

Any licence holder who misbehaves may be lifting his licence and therefore his livelihood in jeopardy. He will lay himself open to complaints from the public which the director general is bound to consider. A. D. Scott.

Understanding agriculture

From Mr. P. Toru.
Sir—About 18 months ago, the Parliamentary Committee of the National Farmers' Union decided to invite MPs from the surrounding urban areas to come down and visit two or three farms. The idea was that they should meet the farmers and see at first hand the methods and problems involved in producing the nation's food, thereby improving the

understanding among the MPs of Britain's premier industry.

The following seven MPs were invited: Michael Stewart, F. Tomney, H. Jenkins, E. Perry, T. Cox, Douglas Jay, and Douglas Munn. Of these only Mr. Douglas Munn accepted, and had a most illuminating day. Since then he has listened most kindly to any approaches we have made to him on the farming front. The others all refused or did not bother to reply. The main excuse was that they had no farmers in their constituency and farming had no relevance to their constituents.

This only goes to show the attitude of so many MPs to food production in this country and one is left with the feeling that perhaps their constituents don't eat. The fact is that until agriculture is afforded support by all Members of the House, it could well be that in 20 years' time they won't have anything to eat except very expensive imported foods, which will do our balance of payments no good at all.

Food prices, as a percentage of the nation's average gross national income, are among the cheapest in the world and in fact cheaper than they were ten years ago. Common Market or no, there is no cheap food on the world market so it makes sense to invest in agriculture now to ensure plentiful supplies of food in the future. Contrary to popular belief we as a country are not self-sufficient in any branch of production, and our food of every £10 earned by the farmer, 57 are re-invested in the business.

Patrick Toru.
Chairman of the Parliamentary Committee, central southern branch of the National Farmers' Union (which covers Middlesex, Surrey and West Sussex).

Uses of pension funds

From Mr. R. Mountjoy.
Sir—Mr. N. G. McLeod (February 15) suggests that pension fund managers should "act in the interests of the people instead of for financial security." Those who seek to direct other people's money are not usually so frank about the consequences. These vast sums, however, on which covetous eyes are being cast, represent the funds of thousands of separate pension schemes and each fund is the sum of the interests of the individual members.

This obvious point always appears to be overlooked by those who have grand plans for the direction of pension fund monies. When such plans are considered from the viewpoint of the individual scheme they appear quite ridiculous. Imagine telling the members that the trustees have decided to abandon the search for financial security in favour of "the interests of the people," whatever that means. The members will not be happy. Before long the trustees will not be very happy either, as they may well find themselves in breach of their responsibilities under trust law.

Are those who seek to direct pension fund monies into less attractive investments prepared to recompense the scheme, or do they expect the members to subsidise the favourite cause or lame dog of the moment? Generally speaking, a sound investment will not require direction or compulsion. Conversely, an investment which requires such prompting should be regarded with the gravest suspicion by the prudent trustee. R. W. Mountjoy, 20 Iruin Drive, Horsham, West Sussex.

To-day's Events

GENERAL
Provisional unemployment figures for February.
Texaco shop stewards consider company's revised pay deal, following their rejection last Friday of its previous offer.
Merseyside County Council announces its spending plans, including measures to attract industry.
Mrs. Margaret Thatcher, Opposition leader, speaks at Engineers' Employers' Federation dinner, Dorchester Hotel, W.I.
Mr. Peter Parker, British Rail chairman, is guest speaker at Westminster Chamber of Commerce lunch, Savoy Hotel, W.C.2.
British Growers Look Ahead conference and exhibition, organised by National Farmers' Union, opens at Harrogate Exhibition Centre (until February 23).

Advertising and Marketing Service Exhibition opens, Wembley Conference Centre (until February 23).
PARLIAMENTARY BUSINESS
House of Commons: Debate on Opposition motion on taxation. Debate on MPs' secretaries and research assistants.
House of Lords: Participation Agreements Bill, third reading. Suppression of Terrorism Bill, committee. Shipbuilding (Redundancy Payments) Bill, second reading. Debate on disarmament.
Select Committees: Nationalised Industries (sub-committee A).

12. Stakis (Reo.) Organisation, Ralfre, 3.
OPERA
English National Opera production of Tosca, Coliseum Theatre, W.C.2, 7.30 p.m.
BALLET
Royal Ballet dance Maserling, Covent Garden, W.C.2, 7.30 p.m.
MUSIC
Margaret Phillips gives organ recital of works by Albin, J. S. Bach and Rameau, St. Lawrence Jewry next Guildhall, E.C.4, 1 p.m.
London Symphony Orchestra, conductor Yevgeny Svetlanov, soloist John Lill (piano) in programme of Rimsky-Korsakov (Procession of the Nobles, and Scherzando), and Beethoven (Piano Concerto No. 5 in E flat), Royal Festival Hall, S.E.1, 8 p.m.

Our vetting system is so strict, 95% of our applicants won't wear it



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Analysis ahead so far and continuing

The first four months of the year, previously held by Harco Motor Group, Meeting, 385/7 Boston Road, N.W., on March 15 at noon.

R24m. by Reed Nampak

TURNOVER FOR the 1977 year of Reed Nampak, the South African company, 62.8 per cent owned by Reed International, came to R141.6m, compared with R131.5m for the previous year. Pre-tax profits were R24.7m, against R15.8m, and earnings per share rose from 66.44 cents (37.58 cents).

The results are not comparable in view of the deconsolidation of the group's foreign subsidiaries in the year and the acquisition of the printing and packaging interests of Reed Corporation (Pty.), acquired with effect from January 1, 1977.

The directors say the results are very gratifying, bearing in mind the depressed economic conditions which prevailed within South Africa during the year. The acquired printing and packaging companies exceeded the forecast earnings estimated at the time of acquisition.

Group turnover (excluding foreign subsidiaries and the acquired printing and packaging companies) increased by 10.3 per cent, when compared with the year ended during the 12 months to end 1976. Attributable earnings calculated on the same basis amounted to 58.78 cents per Ordinary share which, when compared with the previous year, represents an increase of 15.3 per cent.

In view of the increased earnings a final dividend of 18 cents per Ordinary share has been declared making a total distribution of 38 cents, which when equated to the comparative annualised Ordinary dividend of 34.75 cents for the previous year, represents an increase of 4.38 cents per share.

Reed International is contemplating the disposal of its entire shareholding in Reed Nampak to SAPPL. Pending the outcome of these negotiations the listing of the company shares on the Johannesburg Stock Exchange has been suspended.

Hawley Goodall

On turnover of 572,000 compared with 570,000 Hawley's

Trafalgar House £40m. property sales

Trafalgar House yesterday confirmed City of London property sales totalling £40m, yielding purchasing institutions an average yield of 5.7 per cent.

In a circular to shareholders, Trafalgar confirm the sale of Billiter Building, E.C.4, for £22.5m. Prudential Assurance recently announced that it had acquired the block for an initial return of just under 6 per cent.

The other Trafalgar sale is of its one-third interest in the 108,600 sq. ft. Leadenhall House for £10.5m. The group gives shareholders no indication of the institutional purchaser of the property, which was unable to comment on the deal last night.

Mr. Victor Matthews, Trafalgar's deputy chairman and chief executive, also confirms that one further property sale will be completed once the building is ready for occupation in mid-1978.

It is understood that this refers to the 150,000 sq. ft. Wine Office Street development near Fleet Street, E.C.4, pre-let to accountants Touche, Ross, and believed to have been agreed to be sold for around £20m.

Mr. Matthews reaffirms plans for future property development sales. He tells shareholders that, even after repayment of a £10m. bank loan on Billiter, the sales reported to date will boost working capital and, as the sales were "substantially greater" than book value, they will "make a significant contribution to group results for the year to September 30, 1978."

J. B. HOLLIDAY

The directors of J. B. Holliday (Holdings) state that indications are that the final figures for year to June 30, 1977 will be available by March 10 and that the accounts will be available to send to shareholders by March 31. They say there was a delay in obtaining audited accounts of the Belgian subsidiary and it is hoped that there will be no such delays in the future.

Imps pessimism over NSM

IT SEEMS unlikely that there will be any significant development in the tobacco substitute field in the immediate future, the directors of Imperial Group tell members.

The group's sales of cigarettes containing NSM, launched last summer, were disappointing. Lack of price advantage over traditional cigarettes was one reason. The price was determined by the Government's decision that NSM, which is made in the U.K., should be subject to the same level of duty as imported tobacco, they explain.

More seriously there was a lack of support from the authorities which had previously encouraged us in this endeavour, while direct attacks on tobacco substitutes were made by Government-sponsored bodies, the directors comment.

Trading profit of the tobacco division slipped from £81.7m. down to £69.5m, on sales, excluding VAT, up from £1.7bn. to £1.89bn. for the year to October 31, 1977.

The group's total taxable earnings came out lower at £123.1m. (£130.3m) against £123.1m. (£130.3m).—as reported on February 8. The net dividend per 25p share was stepped up to 2.85p (3.085p).

The group is to invest £300,000 in research, new product testing, and additional plant and buildings, in subsidiary Matamoras. And directors remain optimistic for the future prospects of the group.

On increased capital from a one-for-two scrip issue and consolidation, stated earnings per 25p share are more than halved from 2.39p to 1.06p for the half year, and the interim dividend is up from an adjusted 0.835p to 0.9235p net—last year's final was an adjusted 1.15235p paid from profits of £555,958.

Six months tax took £74,500 (£12,500) leaving net profit at £531,458 against £505,070. Figures for the 1976 half year have been adjusted in accordance with ED 19.

The brewing division was affected by the falling purchasing power of customers and the poor summer weather. The trend towards brewery conditioned draught beer was maintained, and production capacity to cope with it was increased. A new canning line was installed at John Smith's brewery but a shortage of cans prevented the new plant making a proper contribution.

The last market continued its growth, though not as rapidly as in capital within 12 months.

The directors of Standard Chartered Bank has approved an increased from £10m. to £15m. in the authorised capital of its wholly-owned subsidiary, Standard Chartered Merchant Bank. At the same time, the issued capital has been raised from £5m. to £10m. to support its increasing activity. This is the second major increase in capital within 12 months.

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Awaiting a supreme decision

BY A. H. HERMANN, LEGAL CORRESPONDENT

THE SAGA of the merger between Guest Keen and Nettlefold, the British engineering group, and Sachs, the leading German motor components group, is approaching its end, or so the protagonists must hope. To-day, the Bundesgerichtshof (BGH), the supreme court of Germany, will hear the appeal against the decision of the Berlin Kammergericht or Appeal Court, which lifted the ban on the merger imposed by the Federal Cartel Office.

These are the latest additions to the obstacles which any attempt at Europe-wide industrial integration faces simultaneously in several countries. Of these obstacles the delays and costs of the German procedure are now probably the most formidable. The sequence between GKN and Sachs would not perceptibly increase the market share which either has in the different fields of their activities. It would assist a further diversification of their manufacturing activities and allow to expand them in certain markets outside Germany. The diversification would, it is believed, reduce somewhat Sachs' too great dependence on the German motor car industry, enabling it to expand into other fields. The stumbling block proved to be the strong position of Fichtel and Sachs, the leading company in the group, in the German market for clutches. The Cartel Office took the view that Sachs has in this market a dominant position and that it can be best to speed up the decision. Finally, there is mounting concern that parties to the merger may suffer from the law's delay more than they would have suffered from an unfavourable decision delivered promptly.

The delays facing companies considering acquisitions or mergers in Europe have now reached a point when they operate as an effective deterrent. In the U.K. it has always been the case that the knowledge that a merger project would be referred to the Monopolistic Commission was in most cases enough for the parties to leave well alone. The EEC Commission's screening of joint ventures has a similar effect. New French rules make it a practical necessity to obtain prior clearance from the Competition Commission before embarking on a merger project creating a market share of 40 per cent, and more.

The issue before the BGH boils down therefore to the question of whether it can be expected that the financial power of GKN can be deployed in combination with Sachs in an anti-competitive way. The Berlin Appeal Court answered this question in the negative but some of its arguments rather obscured the sound core of this decision. Thus when the court said that clutches are a product so well developed that further research and development could be of no great consequence, it appeared to some to make the same sort of dangerous judgment as when Engels (of Marx and Engels) wrote that with the invention of the breech-loaded rifle military engineering would not be able to surpass.

Competitive process The philosophical question before the BGH is what should one make of the German law when it speaks of future developments that "can be expected to take place." The BGH is well known for its reluctance to allow judges to take the place of business executives and it hesitates to allow them the role of soothsayers. Professor F. A. von Hayek who enjoys great authority in Germany has described competition as one of the processes of invention and discovery. The unpredictability of what will happen follows from this nature of the competitive process. Yet in the GKN-Sachs case the dominance of the clutch market by the buyer, namely the motor car industry, should be a sufficiently strong countervailing position to ensure that Sachs will not be able to abuse what ever market strength it has now or will have in the future.

The January success is attributed to the company's ability to help customers who have experienced difficulty in securing imported supplies of the high quality materials required for difficult parts such as sheet steel pressings. The company is confident that the significant changes affecting the industry, following the introduction of EEC legislation and new pricing policies by the British Steel Corporation this year, will have little or no effect on outline plans to expand.

Mr. David Ashwell, managing director, has been encouraged by the number of new customers the company has won since the revised trading patterns were introduced, and feels the trend will underpin the company's efforts to secure a deeper market share.

Atel finishes with a lot of tea unsold Because a fairly large proportion of last season's tea crop remains unsold Mr. M. W. Butterwick, the chairman of Atel, says it is not possible at this stage to make any accurate estimate of the level of profitability in 1977 compared with the previous year when the pre-tax surplus was a record £142m.

However, he describes it as a satisfactory year although production for both subsidiaries levelled out at about the same amount as for 1976. The group's average prices for teas sold up to the end of 1977 showed considerable improvement but a smaller quantity of tea was sold. Jorehaut Tea Company produced 2.18m. kilos (2.16m. kilos) and sales at the London auction were 182 05p (115.11p) per kilo. For Amgoorie Tea Estates the output was marginally down at 1.75m. kilos (1.76m. kilos) but London prices were 144.91p (117.8p) per kilo.

The two proposals for the transfer of these businesses are now under consideration by the Indian authorities but to conform with guidelines intimated by the Indian Government the schemes may have to be somewhat amended, Mr. Butterwick adds.

Steel and Alloy Processing Steel and Alloy Processing, the West Midlands steel stockholding company still has its sights set on expansion at West Bromwich and reports record trading figures for January. December excepted.

1 KD equals US\$3.57 as at 31st December 1977

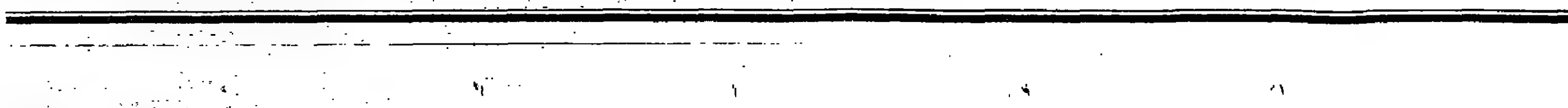
The National Bank of Kuwait S.A.K.

BALANCE SHEET AT 31ST DECEMBER 1977

LIABILITIES		ASSETS		PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED 31ST DECEMBER 1977	
1976 KD Dinars	Kuwaiti Dinars	1976 KD Dinars	Kuwaiti Dinars	1976 KD Dinars	Kuwaiti Dinars
Capital		Cash and Current Accounts with Banks	69,616,194	Profit after charging all expenses, making provisions for contingencies and writing down assets	5,060,714
Authorised, Issued and Paid Up 1,815,000 shares (1976 1,210,000 shares) of KD. 7.500 each fully paid	13,612,500	Money at Call and Short Notice	113,302,339	Balance brought forward from previous year	324,796
Share Premium Account	19,057,500	Quoted Investments at under Market Value			5,385,510
Statutory Reserve	3,885,300	Foreign Government Securities and Securities Guaranteed by Foreign Governments	11,369,193	Transferred to Statutory Reserve	506,000
General Reserve	18,114,700	Other Securities	13,245,680	Transferred to General Reserve	1,494,000
	22,000,000	Deposit Accounts with Banks, Industrial Bankers and Other Financial Institutions	146,139,930	Proposed dividend of 22% (KD1.650 per share) payable 1st February 1978	2,994,750
Profit and Loss Account	390,760	Advances to Customers, Bills Discounted and Other Accounts	262,651,884		4,994,750
	55,060,760	Unquoted Investments (at or under cost)		Balance carried forward	390,760
Current, Deposit and Other Accounts (including Contingency Accounts)	584,345,765	Subsidiaries and Associated Companies	3,770,384		
		Others (of which I.B.R.D. Bonds KD19,668.125 - 1976 KD22,202,500)	22,305,670		
		Land and Buildings (at cost less amounts written off)	642,401,275		
		Liability of Customers for Confirmed Credits, Acceptances and Guarantees as per contra	200,770,551		
	KD843,171,826		KD843,171,826		
Proposed Dividend, payable 1st February 1978	2,994,750				
	642,401,275				
Confirmed Credits, Acceptances and Guarantees on behalf of Customers, as per contra	200,770,551				
	KD843,171,826				

YACOUB YOUSUF AL HAMAD Chairman MOHAMED ABDUL MOHSIN AL KHARAFI Deputy Chairman C. D. FEARS Chief General Manager

Correspondents: United Bank of Kuwait Limited, Barclays Bank International Limited, Standard Chartered Bank, Midland Bank Limited, Lloyds Bank National Westminster Bank Limited, Bank of Tokyo Limited, Chase Manhattan Bank, Fuji Bank Limited, New York Correspondents: Irving Trust, Bank of America (International), Bankers Trust Company, Chase Manhattan Bank, Chemical Bank, Citibank N.A., J. Henry Schroder Bank & Trust, Manufacturers Hanover Trust Company, Morgan Guaranty Trust Company, The Bank of Tokyo Limited, Wells Fargo Bank N.A., Royal Bank of Canada.



Peko's boosted profit and scrip issue

Asarco loss of \$41m. in final quarter

Noranda mines suffer from slow markets

CANADIANS MAY REFORM THEIR TAX SYSTEM

SABINA AWAITS MESSINA VOTE

MODEST RISE IN GOLD OUTPUT

BOARD MEETINGS

PHILIPS BUYS MORE ELECTRONIC RENTALS SHARES

MITCHELL SOMERS BUYS STAKE IN F. H. TOMKINS

Fenner agrees £5.4m. for Jas Dawson

New Linked Life Business

Single Premiums

Year	Ordinary	Pensioners
1973	350	20
1974	100	10
1975	90	10
1976	180	20
1977	240	20

Annual Premiums

Year	Ordinary	Pensioners
1973	40	10
1974	35	10
1975	40	15
1976	60	25
1977	50	40

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	1976 Year to 30 Sept. £000's	1976 Year to 30 Sept. £000's
Turnover	60,541	47,178
Pre-tax Profit	7,355	4,826
Earnings per share	7.6p	5.7p
Dividend per share	2.8p	2.3p
Net Assets per share	38.7p	25.7p

Trident House, Brooks Mews, W1Y 2PN

Tate & Lyle future plans

37 companies wound-up

1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

MONEY MARKET

Small assistance

100

1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 26

Feb. 20 1917	Starting Certificate of deposits	Interbank	Local Authority deposits	Local Auth negotiable bonds	Foreign Reserve Deposits	Unbanked Deposits	Unbanked Bills &c	Reserve Bills &c	Reserve Bills &c
Overnight	—	55 1/2	57 1/2	—	51 1/2	55 1/2	—	51 1/2	55 1/2
1 days notice	—	57 1/2	6	—	52 1/2	55 1/2	—	51 1/2	55 1/2
10 days notice	57 1/2	57 1/2	6	—	52 1/2	55 1/2	—	51 1/2	55 1/2
1 month	57 1/2	57 1/2	6	—	52 1/2	55 1/2	—	51 1/2	55 1/2
3 months	57 1/2	57 1/2	6	—	52 1/2	55 1/2	—	51 1/2	55 1/2
6 months	57 1/2	57 1/2	6	—	52 1/2	55 1/2	—	51 1/2	55 1/2
1 year	57 1/2	57 1/2	6	—	52 1/2	55 1/2	—	51 1/2	55 1/2

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INTERNATIONAL FINANCIAL AND COMPANY NEWS

Gains abroad support Saint-Gobain

BY DAVID CURRY

PARIS, Feb. 20.

STRONG GROWTH overseas by the leading French private company, Saint-Gobain-Pont-a-Mousson, last year compensated for a uniformly dismal performance in France, a performance blamed squarely by the group's chairman, M. Roger Martin, on price controls.

Quoting chapter and verse, M. Martin, whose group has the unhappy distinction of leading the list of nationalised candidates for the Left wins next month's General Election, said that in the east iron pipe sector alone the company could sell at prices 50 per cent. higher in Germany than in France, 30 per cent. higher in the U.S. and 35 per cent. higher in the U.K.

Its paper-making subsidiary, La Cellulose du Pin, with Frs.50m. (\$16.6m.) or so of losses in 1977 had lost Frs.436m. in sales over six years because of the artificial blocking of French paper prices below the international price level.

"The profitability of our French operations is decisively inferior to that of our overseas operations, and this gap is getting worse with time," M. Martin commented, in introducing the provisional 1977 figures. These show group sales up by 10 per cent., allowing for monetary movements and compensating for

(86.6bn.) and net profits advanced by 26 per cent. to Frs.599m. (\$124m.). French companies accounted for 49 per cent. of sales, 25 per cent. of products made in

of successive Governments to return to a genuine market economy. M. Martin added that no fewer than 13 of the 31 categories of products made in

this sector some 75 per cent. of the activity was in France.

In fact, Pont-a-Mousson SA, which accounts for this activity was in deficit in 1977 for the first time since 1946, suffering a 20 per cent. cut in production over two years.

At the operating level, profits were Frs.1bn. against Frs.28m. representing 3.3 per cent. of sales, against 3.3 per cent. for the previous year. Operating profit, suffering from the conversion into francs represented 1.9 per cent. of sales, well below the pre-depression levels of 3.9 per cent. in 1973 and 3.4 per cent. the following year. Similarly, cash flow as a percentage of sales, at 6.7 per cent. failed to come close to the 9 per cent. of 1973 or the 8.1 per cent. of 1974.

M. Martin commented that as a rule of thumb, investments tended to be in proportion to sales in each area. In fact, in 1977 overseas investments accounted for all but Frs.308m. of the Frs.2.12bn. invested. In terms of sector, construction took the lion's share with Frs.266m.

M. Martin had no reassuring news for 1978. He said the year looked very much like a continuation of 1977, and dismissed hopes of a sustained improvement, although he thought that turnover would rise to Frs.35bn.

France were loss-making. There were two German and one Spanish loss-makers while in Brazil and the U.S. there was nothing but black ink.

The group traditionally has four basic activities: flat glass; insulation materials; asbestos cement; and cast iron pipes. Only the latter caused serious anxieties and it was no coincidence that in

structural changes to Frs.31.5bn. cent. of cash flow, and only 6 per cent. of net profits.

In contrast, Germany accounted for 18 per cent. of sales and 17 per cent. of net profits, while the figures for the U.S. were 13 per cent. and 20 per cent. respectively.

Making one of his by now familiar attacks on the refusal

of the sales are those of integrated companies only.

Alfa-Laval estimates maintained profits

By John Walker

STOCKHOLM, Feb. 20.

THE GROUP pre-tax profits of Alfa-Laval, the Swedish dairy farm equipment and industrial separator concern, are estimated at about Kr.205m. (\$65.6m.) in 1977, against Kr.203m. for the previous year, according to the preliminary report for last year. In previous years "calculated depreciation" was applied. Instead of financial depreciation, the change means that the 1977 profit was increased by about Kr.30m.

Unadjusted sales for the group increased by 11 per cent. to about Kr.4.2bn. (\$935m.). The net amount of the financial income and costs—including exchange differences—for the group has improved by approximately Kr.25m. to a surplus of Kr.15m.

The Board recommends an unchanged dividend of Kr.5 per share.

AEG-Telefunken improving

BY JONATHAN CARR

BONN, Feb. 20.

EARNINGS of AEG-Telefunken, West Germany's second largest electrical concern, improved last year and are expected to do so again in 1978. But shareholders, who have long received no dividend payout, cannot be sure of one this year either.

This emerges from a letter to shareholders covering developments last year and the future outlook. The picture is one of further consolidation and restructuring in a concern which has fought its way back to profitability after losses in 1974 and 1975.

Apparently as part of this restructuring, AEG-Telefunken reveals that at the turn of 1977-78 it gave up its 20 per cent. stake in Industrie A. Zausel, the large Italian manufacturer of electrical household appliances. AEG said it made use of its contractual rights to return the stake, which it has held since 1974. It gave no further details.

The company does not yet specify by how much earnings improved against 1976. When AEG-Telefunken recorded net profits of DM397m., enabling it to pay into its pensions fund after two barren years. But it did describe the overall result as still unsatisfactory. It was adversely affected by, among other things, the continued delay

on the construction of nuclear power stations and the cost of restructuring, the positive results of which would only show up fully in the medium term. Total turnover rose by 6 per cent. in 1977 to DM14.3bn., with a fall of 3 per cent. at home counteracted by a rise of 13 per cent. abroad. A total of 48 per cent. of turnover now comes from business abroad—against 44 per cent. in 1976.

Income orders fell by 1 per cent. against 1976 to DM14.5bn., all orders figure a rise of 7 per cent. based on a rise of 10 per cent. in 1976.

NORTH AMERICAN NEWS

Goldman Sachs backs rates lift

BY JOHN WYLES

NEW YORK, Feb. 20.

THE ATTEMPT by several U.S. brokerage firms to boost their commission revenue has been given the vital support of Goldman Sachs, one of the top two institutional brokers on Wall Street.

Following fast on the heels of another Wall Street major, Morgan Stanley, which recently put up its fees to institutional clients earlier this month.

Morgan Stanley followed suit, although it did not announce any discount limits beyond which it would not do business. Neither has Goldman Sachs, which stressed in its statement that no one rate or formula is right or applicable for all transactions. The firm emphasised that "reasonable rates" which

adequately reflect the scope and quality of services rendered are "essential to the preservation of high quality brokerage services."

Since Goldman Sachs has been voted top broker of the year for three years in succession by an independent survey of the institutions, the prospects of Wall Street holding its new charges look immeasurably better. Since Goldman is believed to have had one of its best years ever last year—due more to mergers and acquisitions than securities trading—there is no suggestion that it is supporting the new pricing trend from a position of weakness.

The position could well encourage the industry's leader, Merrill Lynch, to follow suit.

FINANCIAL AND COMPANY NEWS

NEWS ANALYSIS—EIDAI COMPANY

setback for Daiwa Bank

BY DOUGLAS RAMSEY IN TOKYO

Japanese business already accustomed to the Bank of Tokyo and Eidal in 1977 when an outsider was put in to replace its president, an intense red-hot March when Mr. Kawai took over.

Daiwa Bank sent some of its officers into the field yesterday to explain its involvement with Eidal to foreign bankers. Although short on facts, the Daiwa Bank statement put Eidal's liabilities at ¥130bn. (\$54m.) plus another ¥55bn. on a consolidated basis. The bank has refused to disclose its loan total to Eidal on a consolidated basis, and assured foreign bankers that the ¥30bn. of loans to the parent company could easily be covered (if necessary) by the bank's reserves for possible losses put at ¥105bn. Daiwa's profits after all deductions in the last term were ¥11bn.

In short, a foreign banker said "Daiwa has the reserves to stand the shock," but the full extent of its involvement is still unclear.

Neither Daiwa Bank nor any of Eidal's other creditors expect they will have to write off all Eidal's debts, but to reassure Eidal's smaller creditors and clients Daiwa announced yesterday afternoon that it will take up all outstanding issue obligations, to wit: ¥832m. outstanding balance on two corporate issues in June and December 1971 which will be purchased by Daiwa at face value; ¥13bn. still outstanding from an April 1973 convertible issue; and \$3.82m. or a \$10m. convertible

fast pace despite personnel cuts and interest rate cuts from its major bankers amounting to about ¥4bn. annually. In 1977 sales appear to have dropped below the 1975 level to about ¥98bn. and market analysts expect Eidal will notch up a ¥3bn. recurring loss and perhaps more than a ¥6bn. loss after tax.

In the past year, Mr. Kawai has used his influence from Daiwa Bank to enforce cuts in Eidal's personnel, with total employees dropping from just over 3,000 a year ago to 2,600 employees. In addition, Eidal's consolidated subsidiaries employ 1,200 people who now face dismissal or enforced retirement.

Although Eidal's business turned sour in 1975 the company remained the top Japanese plywood maker, even in 1977. But in the meantime, the sector was inundated with new companies and Eidal branched into the prefabricated housing market and built up the capacity to produce 9,000 units a year. In 1977, industry analysts say most prefabricated house manufacturers were operating at about 50 per cent. of capacity and Eidal produced fewer than 3,000 homes for its customers. Thus Eidal has been hard hit by the recession in the domestic housing industry which took its toll about equal to construction materials (45 per cent. of Eidal's sales), housing equipment (22 per cent.) and sales of prefabricated homes and real estate (33 per cent.).

Eidal Company, a leading Japanese plywood and prefabricated housing manufacturer, has applied for Osaka District Court protection in what could prove to be the biggest corporate bankruptcy in post-war Japanese history

Eurobond issue in 1974 (for 15 years) which Daiwa will redeem at face value. Some of Eidal's largest investors, including Japan's largest life insurance companies, dumped large shareholdings last Friday on the Tokyo Stock Exchange when rumours began to take hold about Eidal's impending bankruptcy. The share sales cut Eidal's share price in half that day, closing at ¥51 per share in sharp contrast to Eidal's blue chip days in 1973 when its share price boomed to over ¥1,000 a share.

trachem profits buoyant

JOHANNESBURG, Feb. 20.

ALS group, Sentra-ject, is also engaged in a joint venture with Tate and Lyle in the local manufacture of bio-degradable polyester from sugar. Its other interests are spread across agriculture, plastics and rubber.

Higher profit at McCarthy

AFTER THE somewhat depressing experiences of several companies over the six months to end-December, some more buoyant figures have appeared from different portions of South African industry.

The motor trading group, McCarthy, which had sales of R260m. in its last full year, and holds franchises such as Jaguar, BMW and Datsun, has reported an operating profit a shade higher from R4.2m. to R4.5m. (\$4.9m.) for the six months to end-December. But after a sharp fall in interest paid, group net profit after taxation was up from R0.8m. to R1.9m. and earnings per share hardened from 2.2 cents to 7.3 cents.

The interim dividend was raised from 2.5 cents to 3 cents in a move which restores part of

the cut in the previous full year from 5.6 cents to 6 cents. Earnings are expected to be in line with the first half, which would mean a total of 14.6 cents against 9.1 cents.

DARLING AND Hodgson, the construction and civil engineering arm of Union Corporation, which holds 45 per cent. of the shares, has reported reduced turnover, from R154m. to R142m. (\$164m.) and trading profit up from R12.8m. to R13.6m. (\$15.7m.). Tax has trimmed the rise at the net level, but after lower attribution-of profits to outside shareholders, net earnings are up from R8.5m. to R7.2m. or from 42 cents to 46 cents. The dividend has been raised from 15 cents to 17 cents.

HIGHER interim stage profits announced by South African footwear group Edwicks (1936). Sales for the six months ended end-December rose marginally but pre-tax profits increased by 18 per cent. to R1.12m. (\$1.25m.). A reduced charge for tax helped lift net attributable by more than half from R535,000 to R853,000. The interim dividend is lifted from 1 cent to 2 cents.

Slight fall in UIB earnings

By Michael Standen

UNITED International Bank, the London-based consortium banking group, reports a slight reduction in its earnings for 1977.

The company's pre-tax profits slipped from just under £1.7m. to £1.5m. (\$3.1m.). Mr. Alberto Weissmuller, the managing director, yesterday attributed the fall to two main factors.

These were the rise in the value of the pound, which reduced the value of the bank's foreign currency assets in contrast with the 15 per cent. contribution made to earnings by the revaluation of assets in the previous year; and the lack of demand for medium-term loans at attractive spreads.

With the pressure on margins over the past year, UIB has run down its medium-term lending book, with loans for more than a year falling from £81.8m. to £77.9m. at the end of the year, but has increased its short-term lending business.

At the same time, the bank has concentrated on diversifying the sources of its revenue. Fee and commission income more than doubled last year with the bank co-managing syndicated loans for major borrowers in various countries.

UIB has established itself as a market-maker in the Eurobond secondary market and has begun to develop its investment management activities, including the establishment of a new subsidiary in Jersey to support its United International Bond Fund. This is aimed to appeal particularly to investors in the OPEC states.

Sir Norman Biggs, the chairman, argues that the bank is well placed to reap increased benefit from the diversification of activities undertaken during the year.

The year.

AVCO CORPORATION	Three months ended November 30		Year ended November 30	
	1977	1976	1977	1976
(Thousands of dollars)				
REVENUES Financial services	\$225,767	\$190,730	\$ 821,334	\$ 727,536
Products and research	172,565	140,850	603,357	545,501
Motion pictures and land development	43,934	25,335	113,197	72,323
	\$442,266	\$356,915	\$1,537,888	\$1,345,360
EARNINGS Financial services	\$ 18,108	\$ 14,104	\$ 62,119	\$ 43,484
Products and research	18,573	11,023	47,822	37,435
Motion pictures and land development	4,531	(344)	1,791	(11,130)
EARNINGS FROM CONTINUING OPERATIONS before unrealized losses on foreign exchange fluctuations	41,212	24,783	111,732	69,789
UNREALIZED LOSSES ON FOREIGN EXCHANGE FLUCTUATIONS	(5,653)	(32,109)	(11,615)	(22,972)
DISCONTINUED OPERATIONS	—	—	(400)	32,356
EXTRAORDINARY TAX CREDITS	35,559	(7,326)	99,717	79,173
NET EARNINGS (LOSS)	\$ 43,276	\$ 3,200	\$ 116,603	\$ 91,299
Per common share, primary	\$3.41	(\$.54)	\$8.92	\$6.60
Per common share, fully diluted	1.79	(.54)	4.93	3.98

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The Sumitomo Bank, Limited Tokai International (Asia) Limited Taiwa Kobe Finance Hong Kong Limited

February, 1978

ru franchise for Wearne

SINGAPORE, Feb. 20.

motor trader in the new company, known as Wearne-Wira Malaysia Sdn. Berhad, while the remaining 40 per cent. will be held by Wearne.

The Subaru franchise will be the first Japanese car venture for Wearne which has traditionally been strong in European franchises such as Ford, Leyland, General Motors and Chrysler.

Japanese cars now account for over 65 per cent. of the car market in Malaysia and the

Subaru franchise will enable Wearne to increase its penetration in the Malaysian market. Last year Wearne accounted for 19 per cent. of total car sales in Malaysia and 18.6 per cent. of commercial vehicle sales. Subaru cars currently account for an insignificant proportion of car sales in Malaysia. However, sales are expected to improve when Wearne begins to assemble the cars at its existing assembly plant.

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FINANCIAL TIMES REPORT

Tuesday February 21 1978

Thamesdown

Swindon still retains its tradition as a leading railway town. But by expanding and diversifying its industry the town has been well able to cope with the recent recession and the new district of Thamesdown has every reason for confidence in its future.

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Tairs Editor

EARS ago, when the
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se parts of Britain be joined by the Natural
relied overmuch on
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of Tyneside and others.
nd South Wales.
has adapted spread of jobs among many
industry is still

there in the town, but as it has
slimmed it has taken on a new
life and earlier this month the
first locomotive from the work-
shops for 15 years was rolled
out. The railways are still
important though the town is no
longer dependent on them.

Compared with many other
towns Swindon has ridden the
recession of the past four years
rather more easily. Its unem-
ployment figures are not notice-
ably worse than the national
average and the town, partly
through boundary changes, has
grown and will continue to
grow. The present population—
130,000 in the town, or 180,000
in the whole district of Thames-
down—probably encompasses
another 20,000 in the immediate
environs. By the late 80s to
middle 90s it is expected to
grow to at least 220,000.

Multiples

This expanding population
has come in the wake of the
expanding diversification of
industry. To take the place of
the railway workshops, groups
like British Leyland, Vickers,
Garrard, Wills, Nationswide
Building Society and Hambro
Life now play an important role.
C and A has just arrived in
the shopping centre to join most
of the other multiples. The
Science Research Council will
move its headquarters in before
the end of the year and it will
be joined by the Natural
Environment Research Council.
It could have Kwiksave Discount Group and
others.

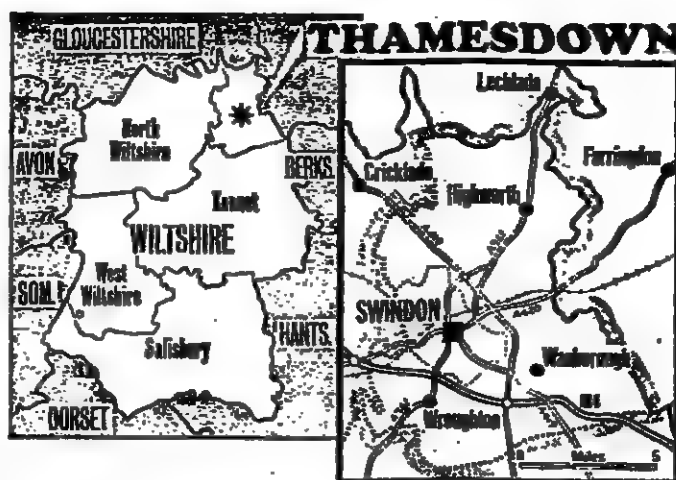
These names alone indicate
three times the size of Burmah's
headquarters. Institutional
finance has been approached to

The last three will ultimately
add some 700 jobs in service
industries. Despite this, Swin-
don remains very much a manu-
facturing centre. Production
accounts for somewhere between
two-thirds and three-quarters of
the jobs available in the town.
Such heavy dependence on
manufacturing brings its prob-
lems as well as its advantages
and there is no doubt that more
services employment would pro-
vide a better spread to the
local economy.

There are hopes for a further
leavening of office employment.
Next year Sir William Halcrow
and Partners will complete a
30,000 square feet headquarters
which will provide work for 250
(not all of whom, of course, will
come from the town, as Halcrow
will bring some people with it).

More immediately, Mr. David
Kent, the go-ahead chief execu-
tive, believes some major com-
panies are about to announce
moves to the town. One of them
is expected to be a major
international group which
could go to a site next to
Burmah Oil's headquarters and
provide work for as many
as 1,500. A second is also an
industrial major and its work-
force, too, could run to four
figures.

On top of this, the council
has other ambitious plans to
attract in more companies by
granting planning permission
against the wishes of the county
council, for a 300,000 square
feet office block near the station.
This building would be up to
nine storeys high and be some
three times the size of Burmah's
headquarters. Institutional
finance has been approached to



pay for the cost and since no
office permit is required several
organisations have expressed
interest in the project.

Part of the reason for this
interest is the excellent position
which Swindon occupies. It is
astride the main railway line to
the West Country and South
Wales and, with the high-speed
trains, the journey from Pad-
dington can take as little as 50
minutes. It is also on the fringe
of the M4 motorway, so that
London Airport can be reached
by car in under the hour. It is
also easily accessible to the
Midlands and the South Coast
ports.

What is of some concern,
though, is the lack of co-opera-
tion between the district council
and the county council. When
Swindon wanted to provide land
for expansion Wiltshire objected
and it was not until the Secre-
tary for the Environment over-
rode the objections in January

that Thamesdown could go
ahead.

Swindon believes that attract-
ing industry into the town is
pointless unless there are
adequate ancillary facilities, the
most important of which is
housing. It has taken a positive
policy towards building houses
(if necessary buying from
private owners) in order to
ensure that potential entrants
are not penalised by a lack of
accommodation. This policy
straddles the social strata, from
council to executive housing.

It is a policy that has paid
off, but it has been accom-
plished in the face of
opposition from the county. "If
we had a single-tier authority,
able to run our own affairs," Mr.
Kent says, "we could do a lot
better. Intervention of other
bodies is frustrating, expensive
and annoying."

From the Government, on the
other hand, the council has had

Category	1977		1978		1979		Total	
	'000 sq. ft.	jobs	'000 sq. ft.	jobs	'000 sq. ft.	jobs	'000 sq. ft.	jobs
Incoming Industry	139.7	408	150.0	150	120.0	250	409.7	808
Incoming Office	71.0	300	167.0	500	30.0	250	268.0	1,050
Relocations	10.8	27	—	—	—	—	10.8	27
Totals	221.5	735	317.0	650	150.0	500	688.5	1,885

a lot of co-operation. Although
it is Whitehall policy to come from
encourage companies to go to
the assisted areas, which means
South Wales and Cornwall, the
Government accepts that there
is little point in refusing a com-
pany a development certificate
if the effect is to kill jobs in
the town. Mr. Christopher

Chataway tried it when he was
Minister for Industry and the
result was that a company
decided to move to Eire rather
than expand in Swindon. The
same mistake has not been
repeated.

As well as factories and
housing, Swindon also needs
more hotels. The four main ones
in and around the town do good
business on weekdays when it is
encouraging.

The level of inquiries for
sites and premises is also
encouraging. In the second half
of last year there were 80
inquiries and another 147
contacts made by the local
authority.

Not all the prospects are so
encouraging and there are
worries over some of the plants.
Severe competition from
Japan has already led to tur-

table subsidiary of Plessey.
There is inevitably concern over
the position of the British
Leyland plant. It has a good
labour-relations record but it is
feared it might be sucked into
other disputes within that un-
happy group.

Then there is the Wills plant,
which produces many of the
company's smaller cigarettes.
EEC regulations which came
into force at the start of
this year discriminate against
smaller cigarettes, and future
production at the plant will
depend to a large extent on how
the tobacco giant can adapt to
the need to produce longer
cigarettes.

Garrard's problems could hit
the job-creation targets. If any
of the other main groups in the
town were similarly affected a
pasty hole could be blown in
all the planners' projections.
Such a pessimistic note might
seem wrong to end on, since
Thamesdown is so full of
optimism. The coming recovery
in the national economy is
operating on the town's side and
if it can weather the next 12
months without too much dis-
turbance then the outlook is
indeed promising.

SWINDON HAS INCENTIVES
NO GOVERNMENT CAN OFFER.

Government aid is the last thing you need in
like Swindon.
ey, Burmah Oil, Hambro Life, British Leyland,
Reliance Ltd. (USA) and W. H. Smith are
t the 300 firms who have already established
lves here. Making Swindon the most successful
ing town in the U.K.
never has it looked more tempting to expanding
ies than it does today.

Office and factory space is immediately available.
There's plenty of land for development sites, with
full I.D.C. support.

Communications are excellent. We're at the hub of
the motorway network, with London and South Wales
along the M4 (a direct link to the new Ford plant at
Bridgend) and the Midlands, North and South West
via the M5.

By Inter City High Speed train, the capital
is an hour or less away. Even Heathrow
Airport is quicker from Swindon than from
central London. And the sea port of
Southampton is a mere two hours away.

To the employees you bring with you, we offer
guaranteed housing and a more relaxed way of life. For
additional recruitment, a large work force is available.

With advantages like these, the only help you'll
need will come from the Council's experienced
development team.

They'll give you, and your employees, every
assistance to make your move a smooth one - from
green fields to full production.

So if your company is going places, send for our
brochure and get the facts about Swindon - the town
planned for growth.

Contact: The Industrial Adviser's Office,
Thamesdown Borough Council,
SWINDON SN1 2JH
Tel: 0793 26161
Telex: 44833

Borough
of
Thamesdown

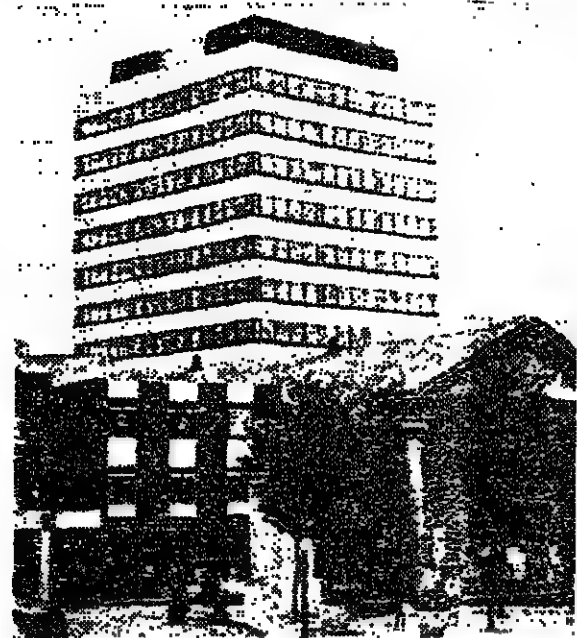
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SINCE 1974, Swindon has been pursuing an integrated house building policy which has doubled the rate of new construction and provided the town with a blend of housing types and tenures designed to meet the needs of an expanding community.

The town's urban area population has grown from about 67,000 in 1952, when it was earmarked for overspill development in the Town Development Act, to just over 120,000 to-day, allaying some earlier fears that it would decline with the shrinking of its major and traditional source of employment, the railway industry.

Future projections envisage the town and its outskirts having a population of between 155,000 and 160,000 by 1986, with the figure rising to around 230,000 before the turn of the century. With these figures in mind, the town decided four years ago to set itself new housebuilding targets to meet the expected demand from a growing population, and to date its record of progress has been good.

The council decided on an annual new building rate of 1,500 units, but also devised a programme which would provide the widest possible housing choice throughout the borough.

At the time the targets and the new strategy were set, the council accepted that there would be some delay in meeting its objectives, but this is now happening and the new building rate in its last financial year reached 1,600 units against only 700 to 800 pre-1974.

For the next couple of years

at least, the council is confident that the planned level of building can be maintained. A recent decision by the Secretary of the Environment to release over 500 acres of land for housing development has provided a major boost for the council's programme.

The actual number of new units aside, Swindon's objective is to ensure that a third of all new homes are built for letting, while another 25 per cent will be built for sale, with the council either sponsoring the development or establishing nomination arrangements.

Its ability to provide its own mortgage finance for applicants has, as in other local authorities, been severely restricted by central Government expenditure cuts. At the moment, only about £400,000 a year is available for home loans against a figure which once exceeded £4m. The Council reports, however, that building society co-operation is going quite well.

Essential

Of the remaining housing being built, about 10 per cent will be the result of housing association work and the rest will be provided by normal private sector development.

The provision of such a wide range of housing is regarded as an essential element of the town's attempts to attract industry and commerce. Under its arrangements, any company coming to Swindon is guaranteed from the outset that the council will provide housing accommodation for all their workers. Once a company has

become established, the council will also undertake to find accommodation for any additional key workers that are subsequently required.

In the words of Mr. Gerald Blythe, director, development and housing for Thamesdown: "Housing is our number one priority. An immediate supply of housing is something which not many local authorities can offer but now we have doubled our rate of building we are confident we can meet any demands made of us."

Such is the priority given to newcomers, that local people on the town's waiting list lose their places in the queue if an incoming company's employees require homes. With a local waiting list of just over 2,000, representing anything up to an eight-month waiting period, such a policy could be potentially very explosive, although Mr. Blythe says this is not the case.

"It is a fact of life here which everyone seems sensible enough to appreciate. If the town is to thrive and expand, then it must put nothing in the way of people who wish to come and contribute to its success. It is in the ultimate interests of everyone that they should be helped first."

Behind the house building programme lies the local authority's determination to ensure that people and local communities can retain their identity. A policy of developing comprehensive "urban villages" has been put into practice over the past ten years, with each area housing between 5,000 and 8,000 people and offering a relatively self-contained community in its own right.

Within each "village," the planners are endeavouring to provide the widest possible cross-section of housing types and the choice ranges from council houses to medium-priced homes and luxury houses costing up to £40,000.

The council's plans for continuing this sort of approach have been given a major fillip by the Secretary of State's decision to open up land on the west of the town for development. The plan had been opposed by the county council because it believed the proposals pre-empted the overall structure plan being drawn up. In the event, the Secretary of State did not agree.

Operational

Of the 515 acres which has become available, the council owns just over 21 per cent, with the remainder lying in private hands. The development of the area, dubbed Westlea Down by the consortium of contractors involved—Bradley Estates, Barratt Developments and Costain—will provide around 4,500 homes, three primary schools, a secondary school, a district centre, an industrial estate and some office accommodation. The first homes on the new development should be available by mid-1979, with the district centre becoming operational in 1980. The cost of the area's development is likely to top £20m.

McLean Homes, part of the Farmac Group, is also prominent in the town, where its southern operations are based. The company's association with Swindon dates back to 1960, since when it has been building homes and commercial property in the area. Its company has just reported sales on its luxury Brook Manor development have topped the £2m mark. Remaining properties are priced from £25,000 to £38,000.

Elsewhere in Swindon, expansion to the east of the town, just being finished off, is providing another 120 people is included in this phase centred on the Dorcan area which has two urban villages established. More developments in both the west and north are planned.

Away from new housing construction, the council has small-scale slum clearance programmes under way and, encouraging private sector grant work wherever possible, it has declared three general improvement areas, one of which includes a railway village, which was built in the mid-1800s and is now being renovated to provide over 300 homes. The scheme has won a number of design awards and the council is pleased to hold it up as an example of the efforts to which it is prepared to go to preserve the town's identity.

At the other end of the scale, the council is just about to market 73 luxury flats in a new development, the first part of a £20m Brunel Centre development and are located in the scheme's tower block. Ref for the one- and two-bed flats will reflect the "luxury" status which has been attached to them.

Michael Casser

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Better demand for property

PROPERTY DEVELOPERS drawn along the M4 Motorway to Swindon and its satellite towns temporarily over-estimated the demand for space in the area. As with so many provincial relocation centres, Thamesdown spent the first half of the 1970s with plenty of potential, and too few tenants.

Now, the Wiltshire Downs are beginning to justify their appeal, and in 1978 local agents expect the over-supply of shop, office and industrial space to be steadily absorbed.

On the office front, Swindon's long empty speculative developments are beginning to attract attention again. At the end of 1977 regional agents J. P. Sturge and Sons report a 150,000-square-foot overhang of unlet space. London and Manchester's 88,000-square-foot Aspen House in Temple Street, Sun Life of Canada's 30,000-square-foot Beaver House in Victoria Road, and the 16,100-square-foot Paxton House, also in Victoria Road, make up the bulk of the available space. The local authority's own 36,000-square-foot David Murray Tower over the Brunel shopping centre will also come on to the market this year.

And a mild flow of owner-occupation schemes under construction in recent years has tended to take the edge from local demand for space.

Unanimous

This supply of unlet space may not be sufficient to meet the demand for offices over the next 12 months. Local agents are unanimous in their view that the office market is on the turn. Farrant and Wightman has let the remaining space in the Princes House development in Swindon for rents of around £4 a square foot. And asking rents ranging from £3.50 to £3.75 a square foot for other large units of modern air-conditioned space in the town are beginning to draw tenants, but are still too low to justify any new speculative building.

Smaller office suites are available in Swindon and on the town fringes, at asking rents ranging from £2 to £4 a square foot depending upon location and quality.

A survey of the Thamesdown industrial property market by Farrant and Wightman shows that some 380,000 square feet of factories and warehouses were taken up in 1977. The agents see little possibility of that annual rate slackening this year, and demand pressure is already putting pressure on industrial rents, which averaged £1.12 to £1.25 a square foot last year and which now hover around the £1.30-a-square-foot level.

There is a mass of potential

new industrial development in the area, and the council's recent success in overcoming county council objections to the rezoning of 1,000 acres of residential and industrial development land to the West of the town opens the door for further leasehold schemes on council land.

The Industrial and Commercial Finance Corporation is developing a 5-acre industrial site at Groundwell Farm, and has completed three speculative units, two of 10,000 square feet and a 20,000 square feet unit. There is scope for upwards of 200,000 square feet of industrial space on its site. But rising building costs are bound to be reflected in future asking rents.

Sturge reports that 60 per cent of Vickers Properties' 308,000 square feet first phase development at the South Marston Industrial Estate is now let, or under offer, at rents up to £1.35 a square foot. And lettings or negotiations on other major sites suggest that, at last year's rate of demand there will be a shortage of modern industrial space by the autumn at the latest.

There is a reasonably good supply of council-owned land available for new industrial building projects, costing between £35,000 and £45,000 a year for a 99-year lease at peppercorn rent. Motors linked private sites with planning consents sell at a significant premium to council land but are increasingly rare.

The council's reluctance permit out-of-town discount stores on industrially zoned land helps to bolster an otherwise sluggish retail market. But Farrant and Wightman, who are completing the final phase of the Brunel Centre, the shopping supply has run ahead population growth in Thamesdown catchment area.

Prime town centre rents range from £16 to £18 a square foot for Zone A space. But a differential between prime and secondary shopping is shown with off centre space available for under £5 a square foot. Demand from town fringe stores has so far been frustrated planning controls.

John Brenno

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سكان المحلي

Growth of industry

LY or another, the Everard group, the department has mounted an aggressive marketing campaign for Thamesdown. Barely as the town now is of the assistance it had received from its designation as an expanding town under the 1952 Town Development Act, and of most other government incentives, it is basing its campaign on its good communications, its relatively low industrial rents and its guarantee that housing will be provided for all workers brought in by new industry and commerce.

Given the size of the housing problem in the South, this homes programme takes on some importance, and the Thamesdown authority itself is currently building at a rate of 1,500 houses per year, for sale and for rent. In conjunction with an active private sector, the authority expects to be able to cope both with the increase in the borough's existing population—mainly young, and as yet with a low rate of retirement—and with that brought in by the considerable amount of new industry and offices development it hopes to attract during the life of the authority's outline 10-year plan up to 1986.

Planning Expansion for the next decade is to be centred on a number of planned industrial sites, mainly to the west. The first, on 80 acres at Blagrove Farm, is already under development. The first phases of another 80-acre site at Groundwell Farm, to the north, are also being taken up. These "employment areas" are being matched residentially with six "urban villages," each with 5,000-6,000 people and their own shopping centres.

and schools. The first two, Toot-hill and Freshbrook, both lying close to the Blagrove Farm industrial development, are already well down the road to completion.

Underlying the planning is a commitment to move Thamesdown on to a much broader industrial and commercial base than the mix it has had in the past, and which has left it particularly vulnerable in periods of recession.

At one stage, the town's lifeblood was the railway workshops, employing 12,000 at their peak. Ravaged by Dr. Beeching's economies of the early 1960s, the workforce there now stands at about 3,000. Thanks to new foreign orders, however, notably a large share in a £40m contract between British Rail, Runslet Holdings and Kenya Railways to build 35 diesel locomotives, prospects in this sector are looking up. The Kenya order is big enough in itself to guarantee jobs at the Swindon works for the next two years.

Currently, the industrial-commerce and service industries mix is about 70-30. There is a strong bias towards light engineering, and though the 200 companies which have moved in during the past 25 years have eradicated the "ghost town" fears raised in Swindon's days as a one-industry town, the economic base is not broad enough yet to eradicate an unsatisfactory unemployment level among the 70,000 young and fairly skilled labour force.

Latest unemployment figures show 5,500 out of work, or some 7 per cent of the labour force—an improvement on the 8 per cent reached last year. But with the Borough also projecting a continuing high rate of school-leavers over the next ten years, there is clearly considerable pressure to achieve a target set by the Thamesdown Authority for the creation of 2,800 jobs this year and 3,000 a year for the next five years at least.

The declared aim of Douglas Smith's new department is to bring the business "mix" to a 50-50 ratio between manufacturing and the services sector. In the past year, says Smith, this kind of mix has been emerging among new arrivals. At the same time, Thamesdown is looking in two other main directions to hedge Swindon's bets against further cyclical disruptions. There is a hunt on for foreign investors (this rating as a major priority) and Smith also warns that the time must come for some, at least, environmentally "undesirable" industry like civil engineering to be installed on the outskirts if the "mix" is to be complete—a stance certain to put the borough once more at loggerheads with the County Council.

(There is no dispute about the desirability of growth between the factions on the Tory-ruled Borough Council: it is accepted as both needed and desirable. "Industrial development policy just is not a political

football here," Smith observes.) The campaign for foreign investors is being concentrated primarily on the U.S., with West Germany second and Japan third in the order of priorities. Advertising campaigns and membership in both U.S. and German Chambers of Commerce are some of the avenues being exploited. On the outskirts of the town, the Lydard Management Smith insists, however, that the Training Centre, a graceful old building in large landscaped grounds which the Borough took over cheaply, then refurbished at considerable expense, is being used for a series of "teach-ins" for foreign embassy officials and would-be industrialists and developers at which Thamesdown's attractions are being advocated.

Although only recently under way, the campaign shows signs of paying off. Of three large companies which may soon announce their arrival in Swindon, one at least is thought to be a large international group. If all three projects come off, they alone will create an estimated 3,000 or more extra jobs. With numerous smaller projects under discussion, there are hopes that the total figure could be nearer the 4,500 mark. Meanwhile, an American pharmaceuticals concern, R. P. Scherer, is building on the Blagrove Farm site and is expected to provide jobs for 250 when it starts operations next year. One Swedish printing company is already established; another Swedish company is said to be about to sign up for an existing factory prior to building its own in the near future.

According to the authority's latest figures, the overall rate of enquiries about locating in Thamesdown is running at 38

per month, of which more than one-third are being treated as serious, "live" possibilities. In the past, the borough has designed and built its own estates for letting, and up to even six months ago the new industrial team might have favoured a programme of advance factories built by the Borough for prospective letting. Smith insists, however, that the pace of activity is increasing to the extent that such policies are grounds which the Borough took not, at the moment at least, to pursue.

Distribution

With four divisions of Plessey present in the town, including its electronic components operation, and a number of computerised warehousing/distribution operations such as the £3m. W. H. Smith retail distribution operation which moved to the area some years ago, one of the industrial team's goals is to attract more computer-related industry. Another, and indicative of the team's optimism, is to obtain some of the spin-off from Ford's Bridgend engine factory when it goes on stream in two years' time. It is suggested that Bridgend is just "two hours' trucking time" down the M4 motorway.

Against this optimism must be set some worries about the town's existing industries, and which underlines the industrial team's concern to develop as fully as possible the offices and services sectors. British Leyland's car body plant, with its 5,000-strong labour force, is still the town's largest employer. In the shadow of last week's decision to close Leyland's Speke plant, and with rationalisa-

tion the order of the day at the beleaguered car company, there is some unease about the future. In fact, however, with its strategic location for supplies to both Oxford and Birmingham assembly plants, the Swindon unit would appear to have the least to worry about in Leyland terms. It also does work for Rolls-Royce, and the type of operation itself lends it a versatility, in extremis, which would render a shutdown highly unlikely.

Of more concern is the situation at Plessey's Garrard turntables stereo equipment subsidiary, where some layoffs have taken place under the intense pressure generated by competition from Japan's manufacturers. Swindon is also the home of the "Woodbine," the small W. D. and H. O. Wills cigarette now struggling with problems created by EEC legislation which renders economic production of smaller cigarettes appears to be daunting the development team. Apart from bringing in new industry, various projects are under way to raise the standard of skills available to those industries. Most notably, there will open soon on the town's Dorcan industrial estate Britain's latest Skillscentre, which will offer half a dozen training courses in engineering, there being a certain shortage of skilled engineering workers in Swindon. Another six courses will be related to service industries. In addition the Training Services Agency, an arm of the Manpower Services Commission, plans to offer the centre's services directly to local industries, to allow them to introduce their own retaining and upgrading schemes.

John Griffiths

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Communications a key asset

to Heathrow, they of the introduction of the 125 mile an hour train service 18 months ago. Bristol is only 24 minutes away via the same service and serves as the interchange for the South-West, the Midlands and the North. Not surprisingly, given its 19th century railway origins, Swindon's railhead has undergone a programme of modernisation to both freight and passenger facilities to keep pace with Thamesdown's population and industrial growth.

Scheduled

With Heathrow so close, air cargo operations clearly are easy. Bristol airport also provides scheduled services to Cardiff, Manchester and Liverpool, the latter two giving access in turn to the full national network. There is an airport within the Thamesdown area itself, at South Marston, which provides access for general light aviation, although other airports in the immediate area are mainly RAF sites and not readily available for civilian use.

Thamesdown's arguments in favour of its location were given a further significant boost last week, when, after a six-month and Exeter being £37m. Royal Portbury Dock was ant Southampton to only 60 miles away, far only via a not-y A-road system. A strong agreement to end a dispute on being now a which had lasted since the docks from London's were officially opened by the station as a result Queen last August.

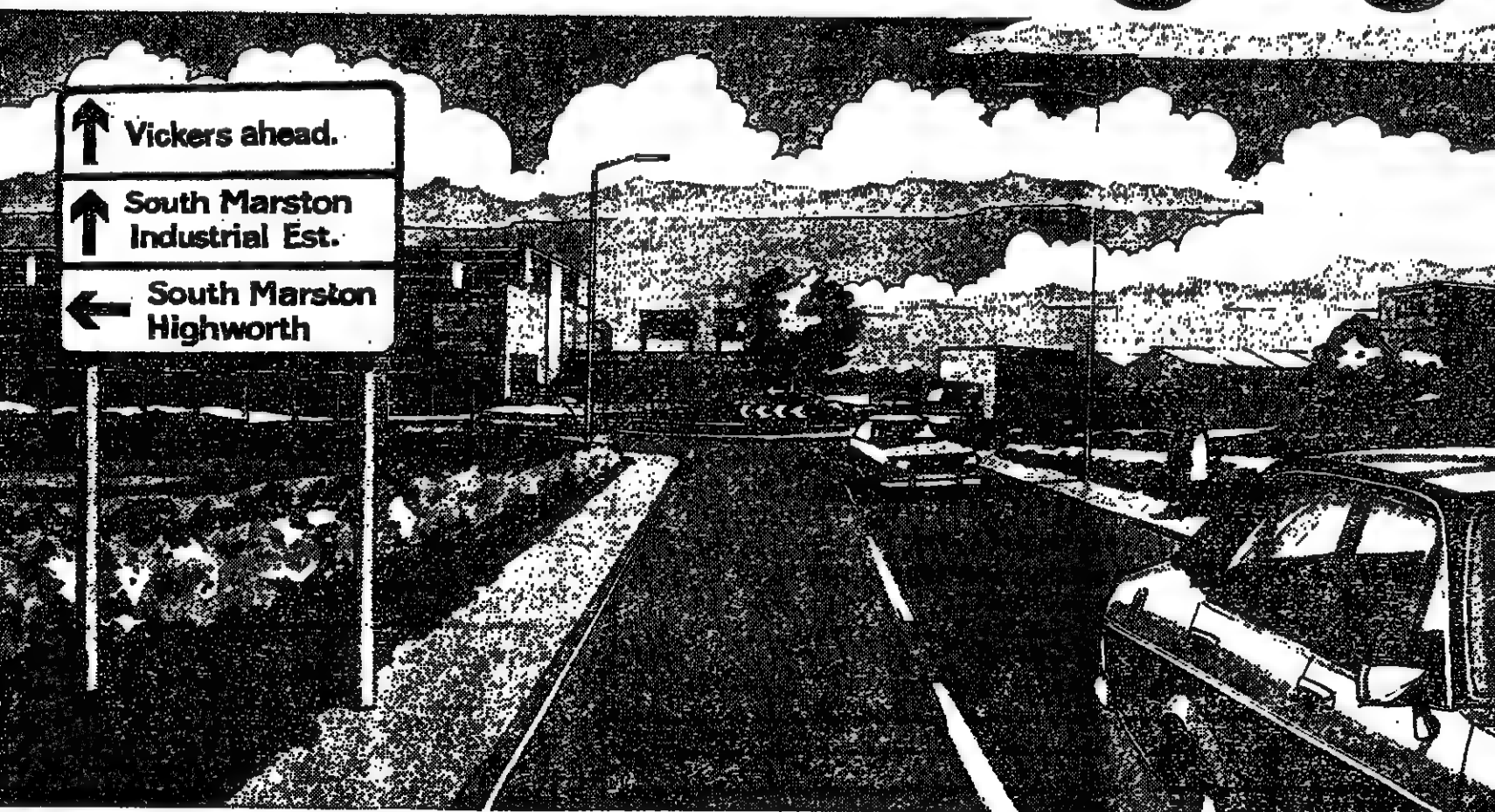
The new facility is an important one: it is under 10 miles from the M4-M5 motorway link and as such is much the easiest reached of all port facilities from Thamesdown. The Avonmouth docks complex has already been seeing increased use by Swindon industry, and Royal Portbury, developed by Bristol City Council as a counter to the rundown of the city centre docks, should accelerate the trend. As well as possessing Britain's largest tidal dock and an ability to take six vessels of up to 70,000 tons each, it has full container and roll-on roll-off facilities.

Thamesdown's location even leaves its industrial administration sanguine, at least on the surface, about the prospects of competition from the Assisted Areas further to the West and the central Government supplied financial incentives they can offer. Thamesdown's relative nonchalance rests on the belief that, in the long term, the permanent prospect of ever-increasing transportation costs to markets stands a good chance of outweighing shorter-term considerations such as development grants, especially in view of what is seen as a certain capriciousness of Government policy in this field.

Quite apart from anything else, suggests Thamesdown's industrial adviser, Douglas Smith, Thamesdown is not too averse to attract companies that cannot stand on their own feet without such grants.

John Griffiths

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There have been quite a few alterations along the way for the Vickers Engineering Group at South Marston. In 20 years since the last aircraft was built at Swindon the world has changed and Vickers itself has changed to keep pace with new technologies.

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Much of a £5m investment plan will go towards expansion and re-equipment of the Hydraulics Division.

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Then, in addition, Vickers Properties Limited is actively developing the new South Marston Industrial Estate which will enable other firms to create jobs and capitalise on Swindon's geographical position.

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VICKERS

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The first phase of the development caters for a wide variety of factory and warehouse space, and some 60 per cent of this first phase is now under negotiation.

Units are available from 7,000 to 100,000 sq. ft. in size with flexibility to satisfy tenants' requirements. Access to the estate is good via the A419 Hungerford to Hereford trunk road, and there is a direct dual-carriageway link with the M4. Adjacent to the Estate is Vickers private airfield with facilities available to estate users.

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STOCK EXCHANGE REPORT

Markets steady with investment interest at low ebb
Gold shares and Gilts up again but equities little changed

Account Dealing Dates

***First Declared Last Account**
Dealings close 10 a.m. on the following dates:
Jan. 30 Feb. 9 Feb. 10 Feb. 21
Feb. 13 Feb. 23 Feb. 24 Mar. 7
Feb. 27 Mar. 9 Mar. 10 Mar. 21

***New time** Dealings may take place from 4.30 a.m. two business days earlier.

With the appalling, if freakish, January trade deficit still fresh in mind, the continuing deterioration in manufacturing order books shown in the latest survey from the Confederation of British Industry and that body's stated concern about the position led to a cautious start to the second and final leg of the Stock Exchange Account yesterday.

Business volume shrank again, official markings falling to 4,204 compared with 4,389 on Friday and 5,930 on the week ago level. After the recent volatility, British Funds became much steadier and managed to harden under the lead of the short end of the market, which closed with gains to 1, and the Government Securities index improved 0.07 to 74.73.

Leading equities, on the other hand, failed to extend the rallying tendency of last Thursday and Friday. No selling pressure developed and prices were usually a shade above the day's lowest by the close but the limited range of price movements were seen in the FT 30-share index: fall of 1.3 at 10 a.m., was reduced to a net point an hour later and virtually held its ground until the close when it was 1.3 down at 438.0.

Scattered firm features emerged from week-end Press comment and trading announcements, while news of two fresh bids in the late trade enlivened interest in the recent speculative favourites, James Dawson was particularly prominent at 12.60, up 38, on the agreed offer from J. H. Fenner while yet another merger move in the investment trust world left Western Canada IT up 15 at 64.50. Overall falls led rises in FT-quoted industrial by 5 to 4 but losses in the FT-Actuaries share index were usually limited with the All-share 0.2 per cent. off at 100.77.

A spurt of 53 an ounce to a three-year peak of 815.27 in the bullion price enabled the Gold Mines share index to put on 3.1 more to 160.2 for a rise in nearly 12 per cent. in the last seven trading days.

Gilts quietly firm

The prospect of a week without any scheduled major trading influences caused a reduction of business in Gilts-edged but at the same time it allowed the market to settle after the past fortnight's volatility. Reported threats by militant power workers for industrial action were not taken too

seriously and both short- and long-dated maturities began marginally firmer. Although interest was slow, the former were undisturbed by a late morning reactionary trend and thereafter edged forward to close a maximum of 2½ point higher, continuing the movement in sparse after-hours dealings. High-coupon longs surrendered the early improvement when reverting to Friday's list levels, but encouraged by the tone in the shorts they too progressed in the end, usually by 1. Rare gains of a similar nature were established by Corporations, but Southern Rhodesian bonds marked time awaiting developments in the constitutional issue; the 2½ per cent. 1965/70 stock remained at 58.3.

Business increased as rates for investment currency continued to rise. The malaise of the day's demand was institutional, often needed for the purpose of investment in U.S. securities, which outweighed offerings on Far Eastern arbitrage account. From a slightly earlier initial rate, a 2½ per cent. rise to 32½ per cent. before settling a point higher on balance at 32½ per cent. Yesterday's SE conversion factor was 0.7294 (0.7350).

Banks trade slowly

Activity in Banks was minimal, Javaya, which reported annual profits at the top end of market estimates last Friday, cheapened 2 to 26p, while Barclays closed the turn easier at 31.5p; the latter preliminary figures are due on Thursday. Elsewhere, further consideration of the record profits and proposed 100 per cent. scrip-issue helped Wagon Finance harden a penny more to 5.10, up 38, on the agreed offer from J. H. Fenner while yet another merger move in the investment trust world left Western Canada IT up 15 at 64.50. Overall falls led rises in FT-quoted industrial by 5 to 4 but losses in the FT-Actuaries share index were usually limited with the All-share 0.2 per cent. off at 100.77.

Not helped by the Price Commission's demand for a 10 per cent. rise in tea prices, the Food Manufacturing sub-section came back 1 per cent. to 180.36.

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Mail orders dull

Stores were notable mainly for dullness in Mail Order concerns following adverse comment, which left Freemans 6 lower at 24½ and Gratian Warehouses and Empire both 4 easier at 12.60 and 14.50 respectively. The Store leaders drifted down on lack of support

Thursday. Albright and Wilson, at 100p, lost 3 of last Friday's gain of 9 which followed comment on the record profits. Costas Bros., however, hardened 2 to 70p.

A firm market last week followed investment comment, Scottish TV A were wanted again at 67p, up 2.

Brooke Bond advanced an otherwise neglected Food sector, losing 2½ to 43p on the Price Commission's report that immediate cuts of about 5p a quarter should be made in the price of 2½. Lyons were also affected at 97p,

of between 3 and 5 were seen in another 11 to 37p, reflecting persistent small buying.

Shipments were uneventful. Following Friday's share placing, Furness Witby eased 3 to 29½ for a two-day loss of 11.

Stirling Knitting stood out in Textiles with a rise of 2 to 27p, after 28p, in response to news of increased first-half profits. Yeaghal, however, remained out of favour, losing 1½ like amount at 48p for a two-day loss of 7 since a Press report on the prospect of redundancies.

Contrasting movements in South African Industrials included Hallett's Corporation, 6 better at 11½, and Greystream, 4 easier at 110p.

Year became unsettled by the Price Commission's demand for a reduction in the U.K. sale price of the commodity, but losses were minimal. McLeod Russell eased 3 to 21½, as did Assam Investments, 11p, and Lunova, 147p.

Turnover in Golds was restricted by the closure of U.S. markets for Washington's Birthday but a good London demand followed the sharp rise in the bullion price and this buying continued throughout with prices closing at the day's best levels.

The Gold Mines index registered a 3.1 rise at 160.2. Gains in the heavyweights ranged to a half-point with Anglo American, which advanced 28 to a 1977-78 high of 535p following a strong local demand. Among marginals Grosvet were outstanding with a 12-rise to a 1977-78 high of 143p while Bracken rose 4½ to 53½.

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NOTES

Prices do not include 5 premium, except where indicated 5, and are in pence unless otherwise indicated. Vintner's, taken in last column, allow for all buying expenses, a 12% discount, include all expenses. 10-day's price. 2 Yield before on offer price, a Estimated 4 10-day's opening price, 3 Distribution fee of U.S. taxes, 4 Periodic premium insurance plans, a Single premium insurance, 5 Offered price, 6 Interest, 7 Expenses, 8 Assets' contribution. Offered price includes all expenses if bought through premium 2 Previous day's price. Net of tax on realized capital (plus unless indicated by A, 5 Germany gross, 6 Suspended

◊ Yield before Jersey tax, 7 Ex-subdivision.

CLIVE INVESTMENTS LIMITED

1 Royal Exchange Ave., London, E.C.4, U.K. Tel. 01-262 110

Index Guide as at 7th February 1978 (Base 100 at 14.1.77)

Clive Fixed Interest Capital	135.08
Clive Fixed Interest Income	122.17


CORAL INDEX: Close 455-460

INSURANCE BASE RATES

† Property Growth	7 1/2%
Canon Assurance	4 1/2%
Vanbrugh Guaranteed	7 1/25%
† Address shown under Insurance and Property Bond Table.	

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YASUDA
TRUST AND BANKING

London Branch: 01-628-5721
Head Office: Tokyo

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FINANCE, LAND		Continued			
	Stock	Price	Chg.	Div. Ret.	Yld. Gr.P.
224	MetLife Ind. 10c	54	0.68	3.2	1.93
225	Met. Sav. & F. 10c	54	0.98	3.3	1.93
226	Met. Sav. & F. R.R. 10c	54	0.98	3.3	1.93
227	N.M.C. Ins. 10c	965	15	0.51	1.6
228	Nippon Ind. 10c	222	10	0.7	1.11
229	Norfolk 10c	222	10	0.7	1.11
230	North Platte 10c	222	10	0.7	1.11
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336	North Platte 10c	222	10	0.7	1.11
337	North Platte 10c	222	10	0.7	1.11
338	North Platte 10c	222	10	0.7	1.11
339	North Platte 10c	222	10	0.7	1.11
340	North Platte 10c	222	10	0.7	1.11
341	North Platte 10c	222	10	0.7	1.11
342	North Platte 10c	222	10	0.7	1.11
343	North Platte 10c	222	10	0.7	1.11
344	North Platte 10c	222	10	0.7	1.11
345	North Platte 10c	222	10	0.7	1.11
346	North Platte 10c	222	10	0.7	1.11
347	North Platte 10c	222	10	0.7	1.11
348	North Platte 10c	222	10	0.7	1.11
349	North Platte 10c	222	10	0.7	1.11
350	North Platte 10c	222	10	0.7	1.11
351	North Platte 10c	222	10	0.7	1.11
352	North Platte 10c	222	10	0.7	1.11
353	North Platte 10c	222	10	0.7	1.11
354	North Platte 10c	222	10	0.7	1.11
355	North Platte 10c	222	10	0.7	1.11
356	North Platte 10c	222	10	0.7	1.11
357	North Platte 10c	222	10	0.7	1.11
358	North Platte 10c	222	10	0.7	1.11
359	North Platte 10c	222	10	0.7	1.11
360	North Platte 10c	222	10	0.7	1.11
361	North Platte 10c	222	10	0.7	1.11
362	North Platte 10c	222	10	0.7	1.11
363	North Platte 10c	222	10	0.7	1.11
364	North Platte 10c	222	10	0.7	1.11
365	North Platte 10c	222	10	0.7	1.11
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367	North Platte 10c	222	10	0.7	1.11
368	North Platte 10c	222	10	0.7	1.11
369	North Platte 10c	222	10	0.7	1.11
370	North Platte 10c	222	10	0.7	1.11
371	North Platte 10c	222	10	0.7	1.11
372	North Platte 10c	222	10	0.7	1.11
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374	North Platte 10c	222	10	0.7	1.11
375	North Platte 10c	222	10	0.7	1.11
376	North Platte 10c	222	10	0.7	1.11
377	North Platte 10c	222	10	0.7	1.11
378	North Platte 10c	222	10	0.7	1.11
379	North Platte 10c	222	10	0.7	1.11
380	North Platte 10c	222	10	0.7	1.11
381	North Platte 10c	222	10	0.7	1.11
382	North Platte 10c	222	10	0.7	1.11
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384	North Platte 10c	222	10	0.7	1.11
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387	North Platte 10c	222	10	0.7	1.11
388	North Platte 10c	222	10	0.7	1.11
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391	North Platte 10c	222	10	0.7	1.11
392	North Platte 10c	222	10	0.7	1.11
393	North Platte 10c	222	10	0.7	1.11
394	North Platte 10c	222	10	0.7	1.11
395	North Platte 10c	222	10	0.7	1.11
396	North Platte 10c	222	10	0.7	1.11
397	North Platte 10c	222	10	0.7	1.11
398	North Platte 10c	222	10	0.7	1.11
399	North Platte 10c	222	10	0.7	1.11
400	North Platte 10c	222	10	0.7	1.11

YASUDA
TRUST AND BANKING
London Branch: 01-628-5721
Head Office: Tokyo

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110	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	5
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143	Sec. Union Am.	44	67 1/2	7 1/4	1.1	53	35.2	85
144	Securities Tr. Co.	157	11	15	16	48	10	710
145	Shawmut Nat. Bk.	157	11	15	16	48	10	710
146	Shawmut Nat. Bk.	157	11	15	16	48	10	710
147	Shawmut Nat. Bk.	157	11	15	16	48	10	710
148	Shawmut Nat. Bk.	157	11	15	16	48	10	710
149	Shawmut Nat. Bk.	157	11	15	16	48	10	710
150	Shawmut Nat. Bk.	157	11	15	16	48	10	710
151	Shawmut Nat. Bk.	157	11	15	16	48	10	710
152	Shawmut Nat. Bk.	157	11	15	16	48	10	710
153	Shawmut Nat. Bk.	157	11	15	16	48	10	710
154	Shawmut Nat. Bk.	157	11	15	16	48	10	710
155	Shawmut Nat. Bk.	157	11	15	16	48	10	710
156	Shawmut Nat. Bk.	157	11	15	16	48	10	710
157	Shawmut Nat. Bk.	157	11	15	16	48	10	710
158	Shawmut Nat. Bk.	157	11	15	16	48	10	710
159	Shawmut Nat. Bk.	157	11	15	16	48	10	710
160	Shawmut Nat. Bk.	157	11	15	16	48	10	710
161	Shawmut Nat. Bk.	157	11	15	16	48	10	710
162	Shawmut Nat. Bk.	157	11	15	16	48	10	710
163	Shawmut Nat. Bk.	157	11	15	16	48	10	710
164	Shawmut Nat. Bk.	157	11	15	16	48	10	710
165	Shawmut Nat. Bk.	157	11	15	16	48	10	710
166	Shawmut Nat. Bk.	157	11	15	16	48	10	710
167	Shawmut Nat. Bk.	157	11	15	16	48	10	710
168	Shawmut Nat. Bk.	157	11	15	16	48	10	710
169	Shawmut Nat. Bk.	157	11	15	16	48	10	710
170	Shawmut Nat. Bk.	157	11	15	16	48	10	710
171	Shawmut Nat. Bk.	157	11	15	16	48	10	710
172	Shawmut Nat. Bk.	157	11	15	16	48	10	710
173	Shawmut Nat. Bk.	157	11	15	16	48	10	710
174	Shawmut Nat. Bk.	157	11	15	16	48	10	710
175	Shawmut Nat. Bk.	157	11	15	16	48	10	710
176	Shawmut Nat. Bk.	157	11	15	16	48	10	710
177	Shawmut Nat. Bk.	157	11	15	16	48	10	710
178	Shawmut Nat. Bk.	157	11	15	16	48	10	710
179	Shawmut Nat. Bk.	157	11	15	16	48	10	710
180	Shawmut Nat. Bk.	157	11	15	16	48	10	710
181	Shawmut Nat. Bk.	157	11	15	16	48	10	710
182	Shawmut Nat. Bk.	157	11	15	16	48	10	710
183	Shawmut Nat. Bk.	157	11	15	16	48	10	710
184	Shawmut Nat. Bk.	157	11	15	16	48	10	710
185	Shawmut Nat. Bk.	157	11	15	16	48	10	710
186	Shawmut Nat. Bk.	157	11	15	16	48	10	710
187	Shawmut Nat. Bk.	157	11	15	16	48	10	710
188	Shawmut Nat. Bk.	157	11	15	16	48	10	710
189	Shawmut Nat. Bk.	157	11	15	16	48	10	710
190	Shawmut Nat. Bk.	157	11	15	16	48	10	710
191	Shawmut Nat. Bk.	157	11	15	16	48	10	710
192	Shawmut Nat. Bk.	157	11	15	16	48	10	710
193	Shawmut Nat. Bk.	157	11	15	16	48	10	710
194	Shawmut Nat. Bk.	157	11	15	16	48	10	710
195	Shawmut Nat. Bk.	157	11	15	16	48	10	710
1								

Finance, Land, etc.								
2168	Albany Nat. Bk.	200	3	20.0	4.7	13.25	2.4	522
2169	American Sav. Bk.	37	37	+12				155
2170	Br. Sav. Bk.	223						155
2171	Br. Sav. Bk.	223						155
2172	Br. Sav. Bk.	223						155
2173	Br. Sav. Bk.	223						155
2174	Br. Sav. Bk.	223						155
2175	Br. Sav. Bk.	223						155
2176	Br. Sav. Bk.	223						155
2177	Br. Sav. Bk.	223						155
2178	Br. Sav. Bk.	223						155
2179	Br. Sav. Bk.	223						155
2180	Br. Sav. Bk.	223						155
2181	Br. Sav. Bk.	223						155
2182	Br. Sav. Bk.	223						155
2183	Br. Sav. Bk.	223						155
2184	Br. Sav. Bk.	223						155
2185	Br. Sav. Bk.	223						155
2186	Br. Sav. Bk.	223						155
2187	Br. Sav. Bk.	223						155
2188	Br. Sav. Bk.	223						155
2189	Br. Sav. Bk.	223						155
2190	Br. Sav. Bk.	223						155
2191	Br. Sav. Bk.	223						155
2192	Br. Sav. Bk.	223						155
2193	Br. Sav. Bk.	223						155
2194	Br. Sav. Bk.	223						155
2195	Br. Sav. Bk.	223						155
2196	Br. Sav. Bk.	223						155
2197	Br. Sav. Bk.	223						155
2198	Br. Sav. Bk.	223						155
2199	Br. Sav. Bk.	223						155
2200	Br. Sav. Bk.	223						155
2201	Br. Sav. Bk.	223						155
2202	Br. Sav. Bk.	223						155
2203	Br. Sav. Bk.	223						155
2204	Br. Sav. Bk.	223						155
2205	Br. Sav. Bk.	223						155
2206	Br. Sav. Bk.	223						155
2207	Br. Sav. Bk.	223						155
2208	Br. Sav. Bk.	223						155
2209	Br. Sav. Bk.	223						155
2210	Br. Sav. Bk.	223						155
2211	Br. Sav. Bk.	223						155
2212	Br. Sav. Bk.	223						155
2213	Br. Sav. Bk.	223						155
2214	Br. Sav. Bk.	223						155
2215	Br. Sav. Bk.	223						155
2216	Br. Sav. Bk.	223						155
2217	Br. Sav. Bk.	223						155
2218	Br. Sav. Bk.	223						155
2219	Br. Sav. Bk.	223						155
2220	Br. Sav. Bk.	223						155
2221	Br. Sav. Bk.	223						155
2222	Br. Sav. Bk.	223						155
2223	Br. Sav. Bk.	223						155
2224	Br. Sav. Bk.	223						155
2225	Br. Sav. Bk.	223						155
2226	Br. Sav. Bk.	223						155
2227	Br. Sav. Bk.	223						155
2228	Br. Sav. Bk.	223						155
2229	Br. Sav. Bk.	223						155
2230	Br. Sav. Bk.	223						155
2231	Br. Sav. Bk.	223						155
2232	Br. Sav. Bk.	223						155
2233	Br. Sav. Bk.	223						155
2234	Br. Sav. Bk.	223						155
2235	Br. Sav. Bk.	223						155
2236	Br. Sav. Bk.	223						155
2237	Br. Sav. Bk.	223						155
2238	Br. Sav. Bk.	223						155
2239	Br. Sav. Bk.	223						155
2240	Br. Sav. Bk.	223						155
2241	Br. Sav. Bk.	223						155
2242	Br. Sav. Bk.	223						155
2243	Br. Sav. Bk.	223						155
2244	Br. Sav. Bk.	223						155
2245	Br. Sav. Bk.	223						155
2246	Br. Sav. Bk.	223						155
2247	Br. Sav. Bk.	223						155
2248	Br. Sav. Bk.	223						155
2249	Br. Sav. Bk.	223						155
2250	Br. Sav. Bk.	223						155
2251	Br. Sav. Bk.	223						155
2252	Br. Sav. Bk.	223						155
2253	Br. Sav. Bk.	223						155
2254	Br. Sav. Bk.	223						155
2255	Br. Sav. Bk.	223						155
2256	Br. Sav. Bk.	223						155
2257	Br. Sav. Bk.	223						155
2258	Br. Sav. Bk.	223						155
2259	Br. Sav. Bk.	223						155
2260	Br. Sav. Bk.	223						155
2261	Br. Sav. Bk.	223						155
2262	Br. Sav. Bk.	223						155
2263	Br. Sav. Bk.	223						155
2264	Br. Sav. Bk.	223						155
2265	Br. Sav. Bk.	223						155
2266	Br. Sav. Bk.	223						155
2267	Br. Sav. Bk.	223						155
2268	Br. Sav. Bk.	223						155
2269	Br. Sav. Bk.	223						155
2270	Br. Sav. Bk.	223						155
2271	Br. Sav. Bk.	223						155
2272	Br. Sav. Bk.	223						155
2273	Br. Sav. Bk.	223						155
2274	Br. Sav. Bk.	223						155
2275	Br. Sav. Bk.	223						155
2276	Br. Sav. Bk.	223						155
2277	Br. Sav. Bk.	223						155
2278	Br. Sav. Bk.	223						155
2279	Br. Sav. Bk.	223						155
2280	Br. Sav. Bk.	223						155
2281	Br. Sav. Bk.	223						155
2282	Br. Sav. Bk.	223						155
2283	Br. Sav. Bk.	223						155
2284	Br. Sav. Bk.	223						155
2285	Br. Sav. Bk.	223						155
2286	Br. Sav. Bk.	223						155
2287	Br. Sav. Bk.	223						155
2288	Br. Sav. Bk.	223						155
2289	Br. Sav. Bk.	223						155
2290	Br. Sav. Bk.	223						155
2291	Br. Sav. Bk.	223						155
2292	Br. Sav. Bk.	223						155
2293	Br. Sav. Bk.	223						155
2294	Br. Sav. Bk.	223						155
2295	Br. Sav. Bk.	223						155
2296	Br. Sav. Bk.	223						155
2297	Br. Sav. Bk.	223						155
2298	Br. Sav. Bk.	223						155
2299	Br. Sav. Bk.	223						155
2300	Br. Sav. Bk.	223						155
2301	Br. Sav. Bk.	223						155
2302	Br. Sav. Bk.	223						155
2303	Br. Sav. Bk.	223						155
2304	Br. Sav. Bk.	223						155
2305	Br. Sav. Bk.	223						155
2306	Br. Sav. Bk.	223						

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39	18	Amal Nigeria	28	251	1.613.6
395	240	Ayer Hsiao SMI	47	444.76	9.32.8
57	25	Beralit Tin	51	3.75	2.9.11.1
155	240	Bierman SMI	27	256.6	1.1.1
570	240	Gecornet	505	18.05	0.4 5.4
13	12	Gold & Ruze 12 sp			
120	160	Gongchow	27	15.0	0 8.6
150	72	Hongphoo	150		
100	60	Hsiao 18p	99		0 12.6
1	1	Janur 18p	49	7.5	
85	30	Kanagang SMI 50	69	2015.5	0.7 4.8
490	240	Killinghall	450	Q125	0 27.8
29	27	Kong Hingding SMI	300	Q8.5	6.8 4.4
49	240	La Pakang	30	102.5	0.5 2.1
70	70	Pengkanan Up	33	6.5	0 16.6
125	135	Pesaling SMI	170	10.9	1.4 1.9
90	35	Sauk Pano	140	11.99	4.6 5.8
73	75	South Crotty 70p	60	541.2	1.5 0.4
416	40	South China SMI 50	17	101.36	1.1 1.3
305	148	Siam Malayan SMI	250		
160	57	Sungai Ren SMI	153		
19	19	Supreme Corp SMI	1	241.00	— 3.6
102	42	Tanjong 15p	05	4.5	0 7.8
95	45	Tongkah Hsiao SMI	86	98.2	1.6 15.3
285	93	Treash SMI	172	203.90	2.0 5.8

190	82	Monetna 20.50	82	15	15Q30	1.5	0
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MISCELLANEOUS

60	9	Borneo Mines 17up	9	—	—	—
115	58	Calaya Mines SMI	1	—	—	—
240	225	Cons. March 30p	240	Q300	0 2	2
475	250	Northgate CSI	252	—	—	—
149	70	R.T.P.	149	18.5	0.11	7.4
70	250	Sabah Inds SMI	154	—	—	—
160	60	Tara Export SMI	857	+25	—	—
150	30	Tanlay Wholes. 1p	45	—	—	—
160	720	Yellow Cons. CSI	120	Q7c	0 3.5	1

NOTES

Dashes otherwise indicated, prices and net dividends are in pence and dividends are in Sips. Estimated price/earnings ratios and covers are based on latest annual reports and accounts and, where possible, are updated to the latest available figures. P/E's are calculated on the basis of net distributions; bracketed figures indicate 10 per cent, or more difference if calculated on "all" distributions. Covers are based on "maximum" distributions. Yields are based on inside prices, are given, adjusted to A.C.T. of 1962, and allow for value of floating interest on Treasury and local rights. Securities with denominations other than sterling are quoted inclusive of the investment dealer's commission.

a Sterling denominated securities which include investment dollar premium.

b "Up" Stock.

c Highs and Lows marked thus have been adjusted to allow for rights issues for cash.

d Interest alone increased or resumed.

e Interest alone reduced, paused or deferred.

f Two-free to non-residents on application.

g Figures or report awaited.

h Diluted security.

i Price at time of suspension.

j Indicated dividend after pending share and/or rights issues cover relates to previous dividend and forecast.

k Free of Stamp Duty.

l Merged bid or reorganisation in progress.

m Not comparable.

n Same interim; reduced final and/or reduced earnings indicated.

o Forecast dividend; cover on earnings updated by latest interim statement.

p Cover allows for conversion of shares and now ranking for dividends or ranking only for restricted dividend.

q Cover does not allow for shares to be converted into rights for dividend at a future date. No P/E ratio usually provided.

r Excluding a final dividend declaration.

s Regional prices.

t No par value.

u Tax free.

v Figures based on prospectus or other official estimate. c Cent.

w Dividend rate paid or payable on part of capital: cover based on dividend on full capital.

x Redemption yield. f Flat yield, a Assumed dividend and yield. b Assumed dividend and yield. c Assumed dividend and yield based on capital sources. d Kenya. n Interest higher than previous issue. e Rights issue pending a Share issue based on preliminary figures. v Australian currency.

y Dividend and yield relative to previous dividend and yield: cover relates to previous dividend, P/E ratio based on latest annual earnings. a Forward dividend; cover based on previous year's earnings. v Tax free up to 30p in the £. w Yield allows for currency clause. y Dividend and yield based on merger terms. v Dividend and yield include a special payment; Cover does not apply to special payment.

z Dividend and yield. B Preference dividend paid or payable. c Canadian. D Cover and P/E ratio based on value of U.K. aerospace subsidiaries. E Issue price. F Dividend and yield based on prospectus or other official estimate for 1977-78. G Assumed dividend and yield after pending share and/or rights issue. H Dividend and yield based on prospectus or other official estimate for 1978-79. I Dividend and yield based on prospectus or other official estimates for 1978-79. J Dividend and yield based on prospectus or other official estimates for 1979-80. K Dividend and yield based on prospectus or other official estimates for 1979-80. L Dividend and yield based on prospectus or other official estimates for 1980-81. M Dividend and yield based on prospectus or other official estimates for 1980-81. N Dividend and yield based on prospectus or other official estimates for 1981-82. O Dividend and yield based on prospectus or other official estimates for 1981-82. P Dividend and yield based on prospectus or other official estimates for 1982-83. Q Dividend and yield based on prospectus or other official estimates for 1982-83. R Dividend and yield based on prospectus or other official estimates for 1983-84. S Dividend and yield based on prospectus or other official estimates for 1983-84. T Dividend and yield based on prospectus or other official estimates for 1984-85. U Dividend and yield based on prospectus or other official estimates for 1984-85. V Dividend and yield based on prospectus or other official estimates for 1985-86. W Dividend and yield based on prospectus or other official estimates for 1985-86. X Dividend and yield based on prospectus or other official estimates for 1986-87. Y Dividend and yield based on prospectus or other official estimates for 1986-87. Z Dividend and yield based on prospectus or other official estimates for 1987-88. AA Dividend and yield based on prospectus or other official estimates for 1987-88. AB Dividend and yield based on prospectus or other official estimates for 1988-89. AC Dividend and yield based on prospectus or other official estimates for 1988-89. AD Dividend and yield based on prospectus or other official estimates for 1989-90. AE Dividend and yield based on prospectus or other official estimates for 1989-90. AF Dividend and yield based on prospectus or other official estimates for 1990-91. AG Dividend and yield based on prospectus or other official estimates for 1990-91. AH Dividend and yield based on prospectus or other official estimates for 1991-92. AI Dividend and yield based on prospectus or other official estimates for 1991-92. AJ Dividend and yield based on prospectus or other official estimates for 1992-93. AK Dividend and yield based on prospectus or other official estimates for 1992-93. AL Dividend and yield based on prospectus or other official estimates for 1993-94. AM Dividend and yield based on prospectus or other official estimates for 1993-94. AN Dividend and yield based on prospectus or other official estimates for 1994-95. AO Dividend and yield based on prospectus or other official estimates for 1994-95. AP Dividend and yield based on prospectus or other official estimates for 1995-96. AQ Dividend and yield based on prospectus or other official estimates for 1995-96. AR Dividend and yield based on prospectus or other official estimates for 1996-97. AS Dividend and yield based on prospectus or other official estimates for 1996-97. AT Dividend and yield based on prospectus or other official estimates for 1997-98. AU Dividend and yield based on prospectus or other official estimates for 1997-98. AV Dividend and yield based on prospectus or other official estimates for 1998-99. AW Dividend and yield based on prospectus or other official estimates for 1998-99. AX Dividend and yield based on prospectus or other official estimates for 1999-00. AY Dividend and yield based on prospectus or other official estimates for 1999-00. AZ Dividend and yield based on prospectus or other official estimates for 2000-01. BA Dividend and yield based on prospectus or other official estimates for 2000-01. BB Dividend and yield based on prospectus or other official estimates for 2001-02. BC Dividend and yield based on prospectus or other official estimates for 2001-02. BD Dividend and yield based on prospectus or other official estimates for 2002-03. BE Dividend and yield based on prospectus or other official estimates for 2002-03. BF Dividend and yield based on prospectus or other official estimates for 2003-04. BG Dividend and yield based on prospectus or other official estimates for 2003-04. BH Dividend and yield based on prospectus or other official estimates for 2004-05. BI Dividend and yield based on prospectus or other official estimates for 2004-05. BJ Dividend and yield based on prospectus or other official estimates for 2005-06. BK Dividend and yield based on prospectus or other official estimates for 2005-06. BL Dividend and yield based on prospectus or other official estimates for 2006-07. BM Dividend and yield based on prospectus or other official estimates for 2006-07. BN Dividend and yield based on prospectus or other official estimates for 2007-08. BO Dividend and yield based on prospectus or other official estimates for 2007-08. BP Dividend and yield based on prospectus or other official estimates for 2008-09. BQ Dividend and yield based on prospectus or other official estimates for 2008-09. BR Dividend and yield based on prospectus or other official estimates for 2009-10. BS Dividend and yield based on prospectus or other official estimates for 2009-10. BT Dividend and yield based on prospectus or other official estimates for 2010-11. BU Dividend and yield based on prospectus or other official estimates for 2010-11. BV Dividend and yield based on prospectus or other official estimates for 2011-12. BV Dividend and yield based on prospectus or other official estimates for 2011-12. BW Dividend and yield based on prospectus or other official estimates for 2012-13. BX Dividend and yield based on prospectus or other official estimates for 2012-13. BY Dividend and yield based on prospectus or other official estimates for 2013-14. BZ Dividend and yield based on prospectus or other official estimates for 2013-14. CA Dividend and yield based on prospectus or other official estimates for 2014-15. CB Dividend and yield based on prospectus or other official estimates for 2014-15. CC Dividend and yield based on prospectus or other official estimates for 2015-16. CD Dividend and yield based on prospectus or other official estimates for 2015-16. CE Dividend and yield based on prospectus or other official estimates for 2016-17. CF Dividend and yield based on prospectus or other official estimates for 2016-17. CG Dividend and yield based on prospectus or other official estimates for 2017-18. CH Dividend and yield based on prospectus or other official estimates for 2017-18. CI Dividend and yield based on prospectus or other official estimates for 2018-19. CJ Dividend and yield based on prospectus or other official estimates for 2018-19. CK Dividend and yield based on prospectus or other official estimates for 2019-20. CL Dividend and yield based on prospectus or other official estimates for 2019-20. CM Dividend and yield based on prospectus or other official estimates for 2020-21. CN Dividend and yield based on prospectus or other official estimates for 2020-21. CO Dividend and yield based on prospectus or other official estimates for 2021-22. CP Dividend and yield based on prospectus or other official estimates for 2021-22. CQ Dividend and yield based on prospectus or other official estimates for 2022-23. CR Dividend and yield based on prospectus or other official estimates for 2022-23. CS Dividend and yield based on prospectus or other official estimates for 2023-24. CT Dividend and yield based on prospectus or other official estimates for 2023-24. CU Dividend and yield based on prospectus or other official estimates for 2024-25. CV Dividend and yield based on prospectus or other official estimates for 2024-25. CW Dividend and yield based on prospectus or other official estimates for 2025-26. CX Dividend and yield based on prospectus or other official estimates for 2025-26. CY Dividend and yield based on prospectus or other official estimates for 2026-27. CZ Dividend and yield based on prospectus or other official estimates for 2026-27. DA Dividend and yield based on prospectus or other official estimates for 2027-28. DB Dividend and yield based on prospectus or other official estimates for 2027-28. DC Dividend and yield based on prospectus or other official estimates for 2028-29. DD Dividend and yield based on prospectus or other official estimates for 2028-29. DE Dividend and yield based on prospectus or other official estimates for 2029-30. DF Dividend and yield based on prospectus or other official estimates for 2029-30. DG Dividend and yield based on prospectus or other official estimates for 2030-31. DH Dividend and yield based on prospectus or other official estimates for 2030-31. DI Dividend and yield based on prospectus or other official estimates for 2031-32. DJ Dividend and yield based on prospectus or other official estimates for 2031-32. DK Dividend and yield based on prospectus or other official estimates for 2032-33. DL Dividend and yield based on prospectus or other official estimates for 2032-33. DM Dividend and yield based on prospectus or other official estimates for 2033-34. DN Dividend and yield based on prospectus or other official estimates for 2033-34. DO Dividend and yield based on prospectus or other official estimates for 2034-35. DP Dividend and yield based on prospectus or other official estimates for 2034-35. DQ Dividend and yield based on prospectus or other official estimates for 2035-36. DR Dividend and yield based on prospectus or other official estimates for 2035-36. DS Dividend and yield based on prospectus or other official estimates for 2036-37. DT Dividend and yield based on prospectus or other official estimates for 2036-37. DU Dividend and yield based on prospectus or other official estimates for 2037-38. DV Dividend and yield based on prospectus or other official estimates for 2037-38. DW Dividend and yield based on prospectus or other official estimates for 2038-39. DX Dividend and yield based on prospectus or other official estimates for 2038-39. DY Dividend and yield based on prospectus or other official estimates for 2039-40. DZ Dividend and yield based on prospectus or other official estimates for 2039-40. EA Dividend and yield based on prospectus or other official estimates for 2040-41. EB Dividend and yield based on prospectus or other official estimates for 2040-41. EC Dividend and yield based on prospectus or other official estimates for 2041-42. ED Dividend and yield based on prospectus or other official estimates for 2041-42. EE Dividend and yield based on prospectus or other official estimates for 2042-43. EF Dividend and yield based on prospectus or other official estimates for 2042-43. EG Dividend and yield based on prospectus or other official estimates for 2043-44. EH Dividend and yield based on prospectus or other official estimates for 2043-44. EI Dividend and yield based on prospectus or other official estimates for 2044-45. EJ Dividend and yield based on prospectus or other official estimates for 2044-45. EK Dividend and yield based on prospectus or other official estimates for 2045-46. EL Dividend and yield based on prospectus or other official estimates for 2045-46. EM Dividend and yield based on prospectus or other official estimates for 2046-47. EN Dividend and yield based on prospectus or other official estimates for 2046-47. EO Dividend and yield based on prospectus or other official estimates for 2047-48. EP Dividend and yield based on prospectus or other official estimates for 2047-48. EQ Dividend and yield based on prospectus or other official estimates for 2048-49. ER Dividend and yield based on prospectus or other official estimates for 2048-49. ES Dividend and yield based on prospectus or other official estimates for 2049-50. ET Dividend and yield based on prospectus or other official estimates for 2049-50. EU Dividend and yield based on prospectus or other official estimates for 2050-51. EV Dividend and yield based on prospectus or other official estimates for 2050

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REGIONAL MARKETS

REGIONAL MARKETS			
The following is a selection of London quotations of shares previously listed only in the provincial markets. Prices of Irish issues, none of which are not officially listed in London, are as quoted on the Irish exchange.			
Albany Inv. 20p.	23	Sheff. Refraint	51
Ash Spinning ..	42	Shook Spring ..	76
Bertam	20	Sindall (Wm.) ..	85
Edgwe. Est. 50p	280		
Flaver Croft ..	25		
Galt & Rose L1	40		
Dyson (R.A.) ..	40		
Ellis & McEldy ..	40		
Evans F.T. 10p.	59		
Ewered	17		
Fife Forge	25		
Finlay Pat. Sp.	26		
Grang Shap. L1	21		
Rigsons Srew ..	25		
1 O.T. Sum £1	20		
Holt (Jas.) 25p.	40		
John Goldsmith ..	24		
Pease (C. H.) ..	62		
Peel Mills	1		
Sheffield Brick	47		

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